# JVC

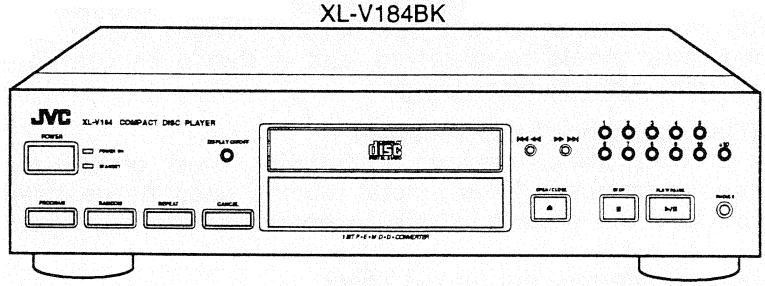
# SERVICE MANUAL

## COMPACT DISK PLAYER

# XL-V184BK
# XL-V284BK

| PICK UP | OPT-6S |
|---|---|
| LSI | MN662720RB |

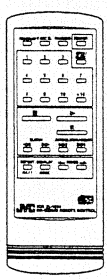
XL-V184BK

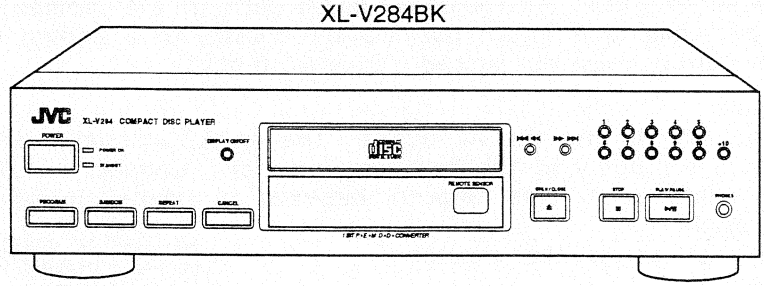


**Area Suffix**

| | |
|---|---|
| BS .... | the U.K. |
| E ..... | Continental Europe |
| G ..... | Germany |
| VX .... | East Europe |
| UT .... | Taiwan |
| U ..... | Other Area |

XL-V284BK





COMPACT disc DIGITAL AUDIO

COMPU LINK Remote Control Component

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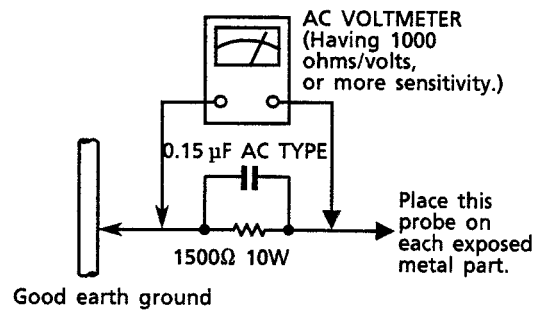
No. 20503
Feb. 1995

## Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).




## Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

# Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

## REPRODUCTION AND POSITION OF LABELS

### WARNING LABEL

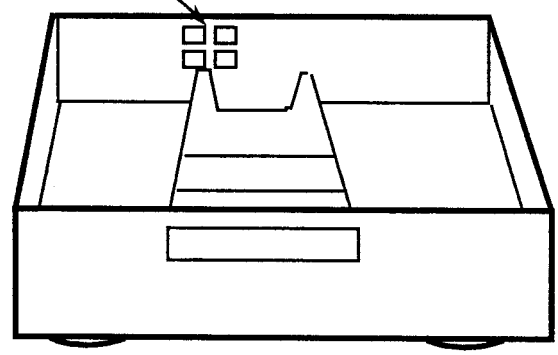
(Except for the U. S. A.)

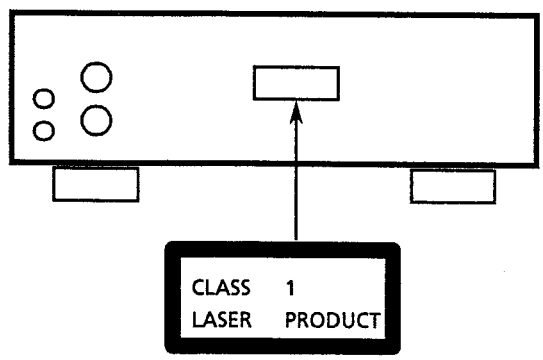
DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)






### CLASSIFICATION LABEL

(Except for the U. S. A. and Canada)

# INTRODUCTION

## Precautions

**Load compact disc only**
Never insert anything other than a compact disc into any part of the player.

**If a problem persists**
If something goes wrong, turn off the power immediately. If the same problem reoccurs when the power is turned on once more, turn off the power again and consult your JVC dealer.

**Handling the power cord**
When unplugging from the wall socket, always pull the plug body, never the power cable.

**Volume settings**
A CD player has almost zero background noise. Because of this, the technique of listening to the background level and then setting the volume before the music starts, as used with analog turntables or tape decks, cannot be used. If you raise the volume level too high, speaker damage may result.

**Condensation**
The CD player uses optical components. If it is moved from a cold location to a warm one, or is used in a room subject to excessive humidity or where a fire has just been lit, condensation could form on the optical components.
This may prevent the laser beam from being properly transmitted and thus causes noise or even a malfunction.
If condensation has formed and the CD player does not function correctly, we recommend that you leave it turned on for an hour or two. If at the end of this time the CD player still does not function properly, please consult your JVC dealer.

**Transporting the unit**
When carrying this unit, it is best to avoid either tilting it or turning it upside-down. Where you cannot avoid doing so, please remove the disc first.

**Using compact discs**
Compact discs are made of plastic and can be easily damaged. If the disc is dirty, scratched, warped or otherwise damaged, the digital information may not be picked up correctly.

**Applicable discs**
This unit can only be used with compact discs bearing the mark below. Never use discs of other types.

COMPACT disc DIGITAL AUDIO

## About this manual

This manual covers the operating instructions for the compact disc player XL-V184BK and XL-V284BK.
There are several functions which require separate instructions for each model. Please check the model number stated on the carton box, and follow the descriptions applicable to your unit.

**This manual is organized as follows:**

The first part, "INTRODUCTION", gives you the precautions when using this unit, and shows you the names of buttons on the main unit and the remote control unit.

The second part, "BEFORE USING FOR THE FIRST TIME", tells you what kind of operations you should do before playing a disc. This part describes where to place the unit for best results, how to install batteries in the remote control unit and how to connect this unit to the amplifier/receiver and other components.

The third part, "BASIC OPERATIONS", describes how to load a disc, and convenient basic functions for playing disc.

The fourth part, "VARIOUS PLAYBACK PATTERNS", describes various functions for playing disc, and convenient functions for recording.

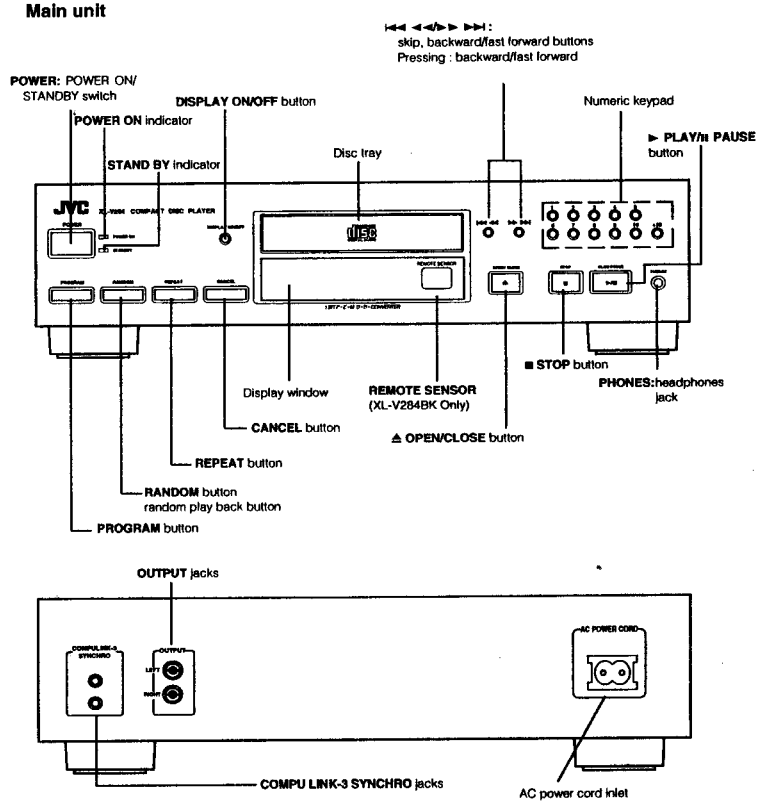
The fifth part, "GENERAL INFORMATIONS", describes the COMPU LINK remote control system which facilitates various operations between JVC components, and explains how to take care of discs.
This part also includes "Troubleshooting" which tells you how to check the unit when a malfunction occurs, and the technical informations regarding this unit.



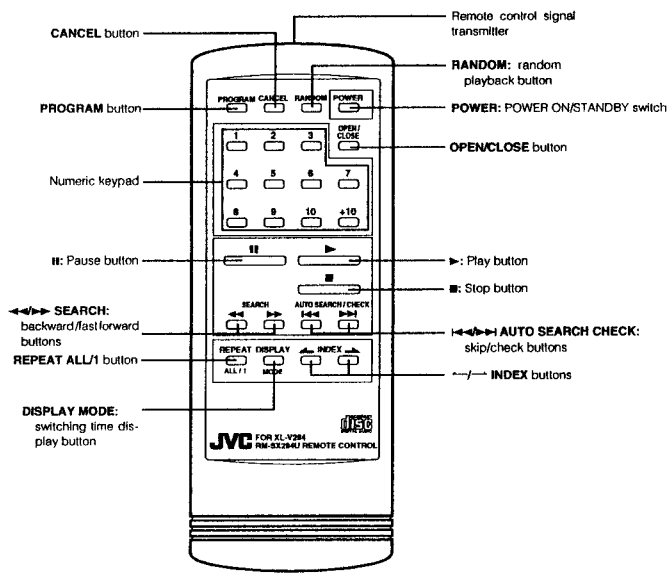


## Names of buttons

### Main unit



## Remote control unit (XL-V284BK only)






# BEFORE USING FOR THE FIRST TIME

## Installing the unit

**Best location**
Select a location which is level, dry and neither too cold nor too hot (temperature range 5°C (41°F) to 35°C (95°F)). Also, avoid dusty locations or any location subject to vibration.

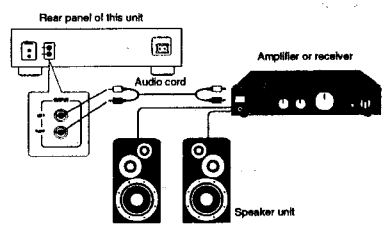
**If interference occurs**
If this equipment is placed near a tuner or a radio receiver tuned to AM frequencies, interference may occur. If this happens, we recommend either that you move this unit as far away as possible from the tuner or receiver or briefly turn off the power to this unit.

## Connecting to other equipments

Connecting to an amplifier or receiver allows you to listen to the sound from the speakers.
Connect the OUTPUT jacks of this unit to the line input jacks of an amplifier or receiver with the supplied audio cord.

***Notes***

- *Never connect the OUTPUT jacks to the PHONO jacks of the amplifier or receiver. This may cause damage to the components.*
- *Make sure that the same channels are connected between this unit and the amplifier or receiver: LEFT to LEFT and RIGHT to RIGHT.*
- *Do not connect the power plug until all connections are complete.*
- *Connect the plugs firmly. Loose connections may cause noise or malfunction.*



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XL-V184BK
XL-V284BK

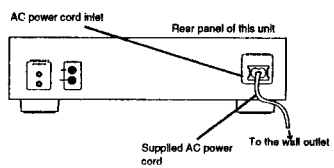
# Supplying the power

## To connect the AC power cord of the main unit

The AC power cord is supplied separately and must be connected to the unit.
Plug the AC power cord into the AC POWER CORD inlet of this unit and connect to the wall outlet after all connections are complete.

***Note***

*When using the COMPU LINK Remote Control System, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver.*







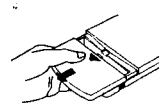

# Installing the batteries

(XL-V284BK Only)

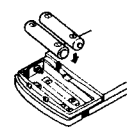
## To install the batteries in the remote control unit

Before operating the remote control unit, install two batteries.

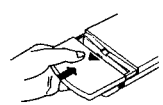
1. **Remove the rear cover of the remote control unit by pressing down and simultaneously pulling it backwards.**



2. **Install batteries. Be sure that the batteries are installed with correct polarity, (+) and (–).**



3. **Attach the rear cover by sliding it back into position.**



***Notes***

*Incorrect use of batteries can cause corrosion or damage. Note the following points to lengthen battery life.*

- *Install batteries observing the correct polarity, (+) and (–).*
- *Do not use new and old batteries simultaneously.*
- *Batteries with similar shapes may have different voltage ratings. Be sure to use the correct batteries.*
- *Remove batteries from the remote control unit if it will not be used for a long period of time.*
- *Do not expose batteries to heat or flame.*

**Battery replacement**

Service life of batteries depends on the condition of use; standard life is about one year. When the batteries become weak, the operating distance of the remote control unit becomes short. If this happens, replace the batteries (1.5 V, UM-4/R03/AAA) with new ones.

***Note***

- *The lower the temperature, the shorter the battery life.*

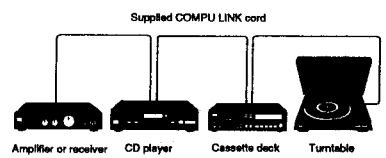
# COMPU LINK connection

JVC's COMPU LINK Remote Control System provides unified control over system components connected with COMPU LINK. Connecting JVC audio components with the COMPU LINK jacks automatically controls relative operations between components and facilitates various operations. With the COMPU LINK connection to an amplifier or receiver, you can operate XL-V184BK/XL-V284BK with the amplifier or receiver's remote control unit. Synchronized recording is also available with this feature.

**Connecting the COMPU LINK cord**

The COMPU LINK-3 SYNCHRO jacks are used to output and input the control signal for the COMPU LINK remote control system.
COMPU LINK-compatible products are provided with the jacks marked COMPU LINK-1, COMPU LINK-2 or COMPU LINK-3, referring to the COMPU LINK version. XL-V184BK/XL-V284BK is equipped with COMPU LINK-3. You can connect XL-V184BK/XL-V284BK also to a component with a lower COMPU LINK versions. But, in that case, only the lower versions' features will be available.
Plug the supplied COMPU LINK cord into the COMPU LINK-3 SYNCHRO jack on the rear panel of XL-V184BK/XL-V284BK. Plug the other end into the COMPU LINK jack of the other component. If there are two COMPU LINK jacks, plug it into either of them.

**Connecting the COMPU LINK system components with the COMPU LINK cords**

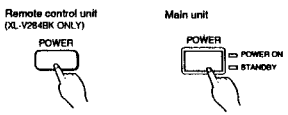


# BASIC OPERATIONS

## Basic functions for disc playback

### Turning on the power of this unit

**Press the POWER switch to turn on this unit. The POWER ON indicator is lit.**



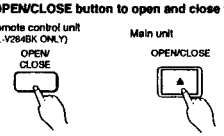

Press again to turn the power off and activate the standby mode. The STANDBY indicator is lit.

The power is automatically turned on also by;
- Pressing the ⏏ OPEN/CLOSE button.
- Pressing the ► button on the remote control unit or the ► PLAY/II PAUSE button on the main unit.

***Notes***
- *A small amount of power (3 watts) is consumed even in the standby mode.*
- *To turn the power off completely, disconnect the power cord from the wall outlet.*

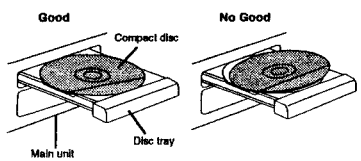
### Loading a disc in the disc tray

**Use the ⏏ OPEN/CLOSE button to open and close the disc tray.**




1. **Open the disc tray by pressing the ⏏ OPEN/CLOSE button.**
2. **Place a disc on the disc tray according to the groove with its label side up.**
3. **Close the disc tray by pressing the ⏏ OPEN/CLOSE button.**

***Note***
- *When loading a disc in the disc tray, be sure to put the disc according to the groove. Otherwise, the disc will be damaged when the disc tray is closed, and the disc cannot be removed from the unit.*




### Remote control operation (XL-V284BK Only)

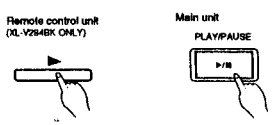
Point the remote control unit towards the REMOTE SENSOR and operate it steadily and carefully. The remote control unit can be used within a range of about 7 meters (23 feet) from the REMOTE SENSOR, and at angles of up to about 30 degrees.





### Playing a disc

**Press the ► button on the remote control unit or the ► PLAY/II PAUSE button on the main unit.**

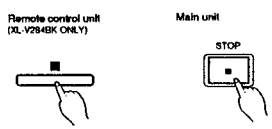



The ► indicator lights on the display and playback starts.
When no disc is loaded in the unit, the disc tray opens.

To stop playback temporarily, press the II button on the remote control unit or the ► PLAY/II PAUSE button on the main unit.
The II indicator lights on the display and playback stops temporarily.
To resume playback, press the ► button on the remote control unit or the ► PLAY/II PAUSE button on the main unit.

### Stopping playback

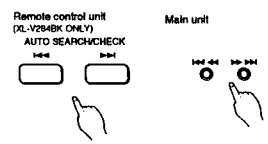
**Press the ■ button.**




## Locating a point to start playback

### Skipping to a desired track

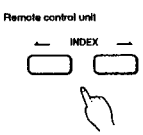
**Use the I◄◄/►►I buttons.**




To skip back to the beginning of the track being played, tap the I◄◄ button. When the beginning of the track is reached, tapping this button again skips to the previous track.
To skip to the next track, tap the ►►I button.
When using the I◄◄ ◄◄ / ►► ►►I buttons on the main unit, tap them until the desired track appears.

### Skipping to a desired index (XL-V284BK Only) (for a disc marked with IN:DEX)

**Use the ←/→ INDEX buttons.**




To skip back to the beginning of the index being played, tap the ← INDEX button. When the beginning of the index is reached, tapping this button again skips to the previous index.
To skip to the next index, tap the → INDEX button.



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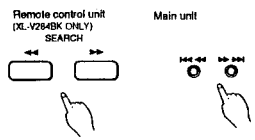
### Searching for a desired section

**Keep the ◄◄/►► SEARCH buttons on the remote control unit or the I◄◄ ◄◄/►► ►►I SEARCH buttons on the main unit pressed during playback.**

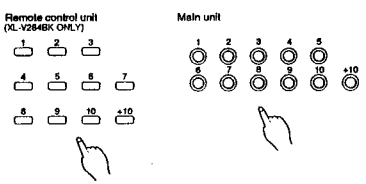



Playback advances or reverses rapidly.
While the ◄◄ or I◄◄ ◄◄ button is kept pressed, playback rapidly reverses toward the beginning of the track. While the ►► or ►► ►►I button is kept pressed, playback rapidly advances toward the end of the track. When the desired section is reached, release the button. The player resumes normal playback from that point.

***Note***
*Two speeds are available for fast forward and fast backward. Pressing and holding the button provides the faster speed.*

### Specifying a desired track

**To specify the desired track number, use the numeric keypad (1-10, +10).**




The unit searches for the selected track and playback starts automatically.
When selecting track number 10 or less, press the corresponding numeric button. When selecting track number 11 or above, use the [+10] button.
Example: To select track number 12, press [+10] and then [2].
To select track number 25, press [+10] twice and then [5].
To select track number 30, press [+10] twice and then [10].

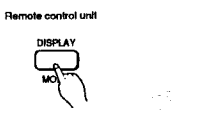
***Note***
*The track number which does not exist on the selected disc, cannot be selected.*

## Switching the display

*You can switch the time display mode to obtain informations about the playing time of the disc, and also turn on/off the display during playback.*

### Switching the time display (XL-V284BK Only)

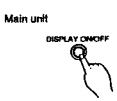
**Each time the DISPLAY MODE button is pressed, the time display changes as the following.**




The corresponding indicator lights in each time mode.
**EACH:** Shows the elapsed time of the track being played.
**EACH REMAIN:** Shows the remaining playback time of the track being played.
**TOTAL:** Shows the total playing time of the disc being played.
**TOTAL REMAIN:** Shows the remaining playback time of the disc being played.

### Turning on/off the display during playback

**Press the DISPLAY ON/OFF button during playback,the display is turned off.**




The display is automatically turned on when the unit enters in stop,pause,open,or search mode.
It is recommended to utilize this function, since the sound quality is improved by turning off the display.

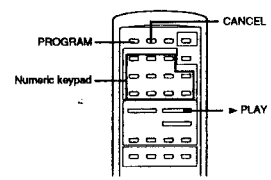
To cancel the function and turn on the display, press the DISPLAY ON/OFF button again or press the ■ STOP button.



# VARIOUS PLAYBACK PATTERNS

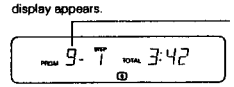
## Playing tracks in a desired order

*You can play only the favorite tracks in any desired order.*




1. **In stop mode, press the PRAGRAM button so that "PRGM" lights on the display.**

2. **Select the track number with the numeric keypad.**
Refer to "Specifying a desired track" on page 9 for entering the track number.
The selected track number is programmed and the following display appears.




- If you want to cancel the displayed program step, press the CANCEL button and then enter the new track number.

3. **Repeat step 2 for other tracks to be programmed.**
You can program up to 32 tracks.

4. **Start playback by pressing the ► button.**
The programmed tracks are played in the programmed order.

- You can skip to a desired program step with the I◄◄ or ►►I button.
- You can add tracks in the program during the playback.

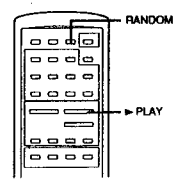
**To check the program contents**
Press the I◄◄ or ►►I button during stop mode. Each time the I◄◄ or ►►I button is pressed, the program contents are displayed in the programmed order or the reverse order.

**To exit program mode**
Press the PROGRAM button again, and the program mode is cancelled.

**To clear the entire program**
In stop mode, press the ■ STOP button on the main unit. The program contents will be cleared, however, the program mode is not canceled.

## Playing tracks in a random order

*You can select and play tracks in a random order. Selections are made so that each track in the disc is played only once.*




1. **Press the RANDOM button so that the "RANDOM" indicator lights on the display.**

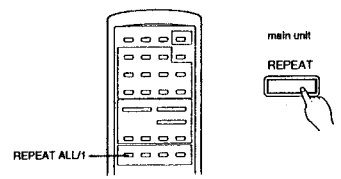
2. **Press the ► button and start playback.**

- To skip to the track to be played next, press the ►►I button.

**To cancel random playback**
In stop mode, press the RANDOM button . The "RANDOM" indicator goes out and the random playback is canceled.

## Playing repeatedly

*You can repeatedly play the whole disc or one track.*
*It is also possible to utilize this function in combination with random/program playback function.*




### Repeating whole disc

**Press the REPEAT (ALL/1) button so that the REPEAT indicator lights on the display.**

All tracks are played repeatedly.

### Repeating one track

**Press the REPEAT (ALL/1) button so that the REPEAT 1 indicator lights on the display.**

The displayed track is played repeatedly.

**To cancel repeat mode**
Press the REPEAT (ALL/1) button so that the REPEAT and REPEAT 1 indicators go out.



# GENERAL INFORMATIONS

## COMPU LINK remote control system

*The COMPU LINK Remote Control System controls relative operations between components automatically and facilitates various operations.*

This is a system originated and developed by JVC for facilitating various system operations.
The following is a brief explanation of this system:

**Automatic source selection**
When the supplied COMPU LINK cord is utilized to connect this unit to others equipped with COMPU LINK jacks, switching-in of each system component can be performed with a single touch on the source selector button located on a JVC amplifier or receiver.
When selection is carried out in this manner, the corresponding unit will automatically start operation.
Upon pressing of the play button, the source selector of the amplifier or receiver changes automatically. When a new unit is switched in, the previously selected component stops operation within five seconds.

**Synchronized recording**
Synchronized recording refers to the process in which a JVC cassette deck starts recording, synchronized with this unit. Synchronized recording is carried out as follows:

1. Set the cassette deck to the recording pause mode in accordance with its instructions.
2. To record only certain tracks, program the tracks in any order, as desired.
3. Press the ► PLAY/II PAUSE button on the front panel of this unit. The cassette deck automatically starts recording, synchronized with this unit.

***Notes***

- *Synchronized recording stops automatically when this unit stops playback.*
- *To cancel synchronized recording, press the ■ STOP button of this unit or the cassette deck.*
- *To properly operate the synchronized recording, the buttons/controls other than POWER, ■ STOP and OPEN do not function.*
- *If the recording pause mode is set on the cassette deck by pressing the II PAUSE button after pressing the ● REC and ► PLAY buttons simultaneously, synchronized recording is not possible. For details, refer to the instructions for the cassette deck.*

**Automatic power on/off function**
This function is to control the power on/off of the receiver/amplifier or this unit respectively as the following.

- When this unit enters playback mode, the power of the receiver or amplifier is turned on.
- When the source selector of the receiver/amplifier is set to CD function mode, the power of this unit is turned on.

***Notes***

- *Abnormal operation may result if the power supply of the component(s) is interrupted. If this happens, you must start over again.*
- *Ensure that the COMPU LINK jacks of the each component are connected with the supplied COMPU LINK cord. Also, be sure to fully read the instructions for each component.*
- *When the power of the amplifier or receiver is switched off, this unit is also turned off automatically.*

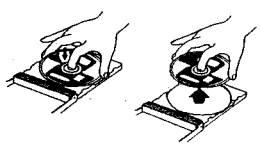


(No. 20503) 1-9

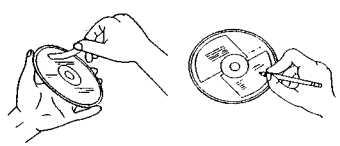
XL-V184BK
XL-V284BK

## Care and handling

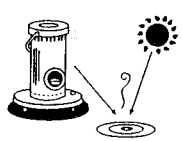
**How to handle CDs**
When handling compact discs, do not touch the surface of the disc (reflective silver side - the side without the label).
Since compact discs are made of plastic, they are easily damaged. If the disc gets dirty, dusty, scratched or warped, the sound will not be picked up correctly and, in addition, such discs may cause the CD player to malfunction.



**Even on label side**
Do not damage the label side, stick paper to or use any adhesive on this surface.



**Storage**
Make sure that discs are kept in their cases. If discs are piled one on top of another without their protective cases, they can be damaged. Do not put discs in any location where they can be exposed to direct sunlight - or in any place where humidity or temperature is high. Avoid leaving discs in your car!



**Maintenance of discs**
When there are fingerprints or other dirt adhering to a disc, wipe the disc with a soft, dry cloth with a movement going from the inside outwards.
If difficult to clean, wipe the disc with a cloth moistened with water.
Never use record cleaners, petrol, alcohol or any anti-static agents.

## Troubleshooting

*What appears to be a malfunction may not always be serious. Please go through the following list before requesting service.*

| Symptom | Possible cause | Remedy |
|---|---|---|
| The unit is not operative. | Power plug is disconnected from the AC outlet. | Connect the plug to an AC outlet. |
| | Disc is not loaded. | Load a disc in the disc tray. |
| The remote control unit does not function. (XL-V284BK only) | Batteries are exhausted. | Replace both batteries. |
| | There is an obstacle between remote control unit and the REMOTE SENSOR of the main unit. | Remove the obstacle. |
| | Direct sunlight shines on the REMOTE SENSOR of the main unit. | Shade the unit from the direct sunlight. |
| Playback is not possible. | Disc is inserted upside down. | Load a disc with its label-side up in the disc tray. |
| | Disc is not loaded in the correct position. | Load the disc according to the groove of the disc tray. |
| | Moisture is condensed inside the unit. | Leave the unit turned on until the moisture evaporates. |
| The reproduced sound includes noise. | Disc is dirty. | Wipe off the disc surface with a soft cloth. |
| | Disc is warped. | Replace the disc with a new one. |
| The sound is intermittent. | Disc is scratched. | Replace the disc with a new one. |

## Care and handling

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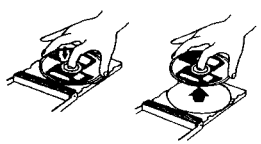

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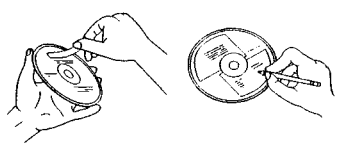

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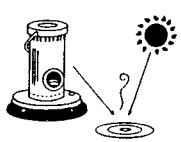

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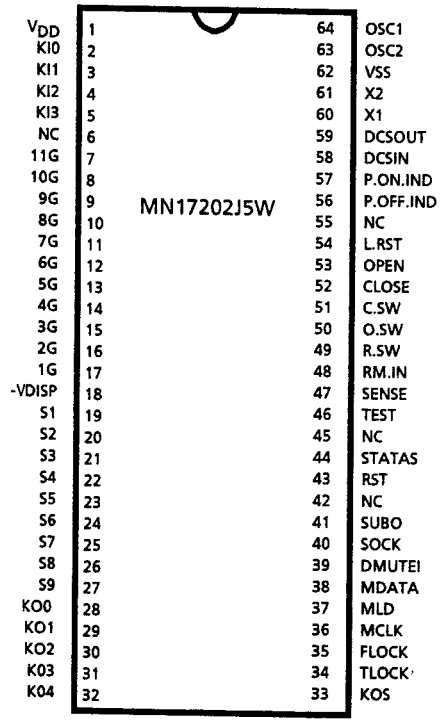
| | There is an obstacle between remote control unit and the REMOTE SENSOR of the main unit. | Remove the obstacle. |
| | Direct sunlight shines on the REMOTE SENSOR of the main unit. | Shade the unit from the direct sunlight. |
| Playback is not possible. | Disc is inserted upside down. | Load a disc with its label-side up in the disc tray. |
| | Disc is not loaded in the correct position. | Load the disc according to the groove of the disc tray. |
| | Moisture is condensed inside the unit. | Leave the unit turned on until the moisture evaporates. |
| The reproduced sound includes noise. | Disc is dirty. | Wipe off the disc surface with a soft cloth. |
| | Disc is warped. | Replace the disc with a new one. |
| The sound is intermittent. | Disc is scratched. | Replace the disc with a new one. |

# Description of Major ICs

## ■ MN171202J5W (IC201) : System controller

### 1. Terminal Layout




### 2. Key Matrix

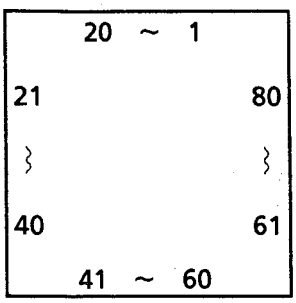
| | KEY IN0 (pin2) | KEY IN1 (pin3) | KEY IN2 (pin4) | KEY IN3 (pin5) |
|---|---|---|---|---|
| KEY OUT 5 (pin33) | DISP OFF | ▶/II | ■ | +10 |
| KEY OUT 4 (pin32) | | | 5 | 10 |
| KEY OUT 3 (pin31) | | | 4 | 9 |
| KEY OUT 2 (pin30) | | ▶▶ ▶▶I | 3 | 8 |
| KEY OUT 1 (pin29) | | I◀◀ ◀◀ | 2 | 7 |
| KEY OUT 0 (pin28) | CANCEL | OPEN CLOSE | 1 | 6 |

### 3. Terminal Description

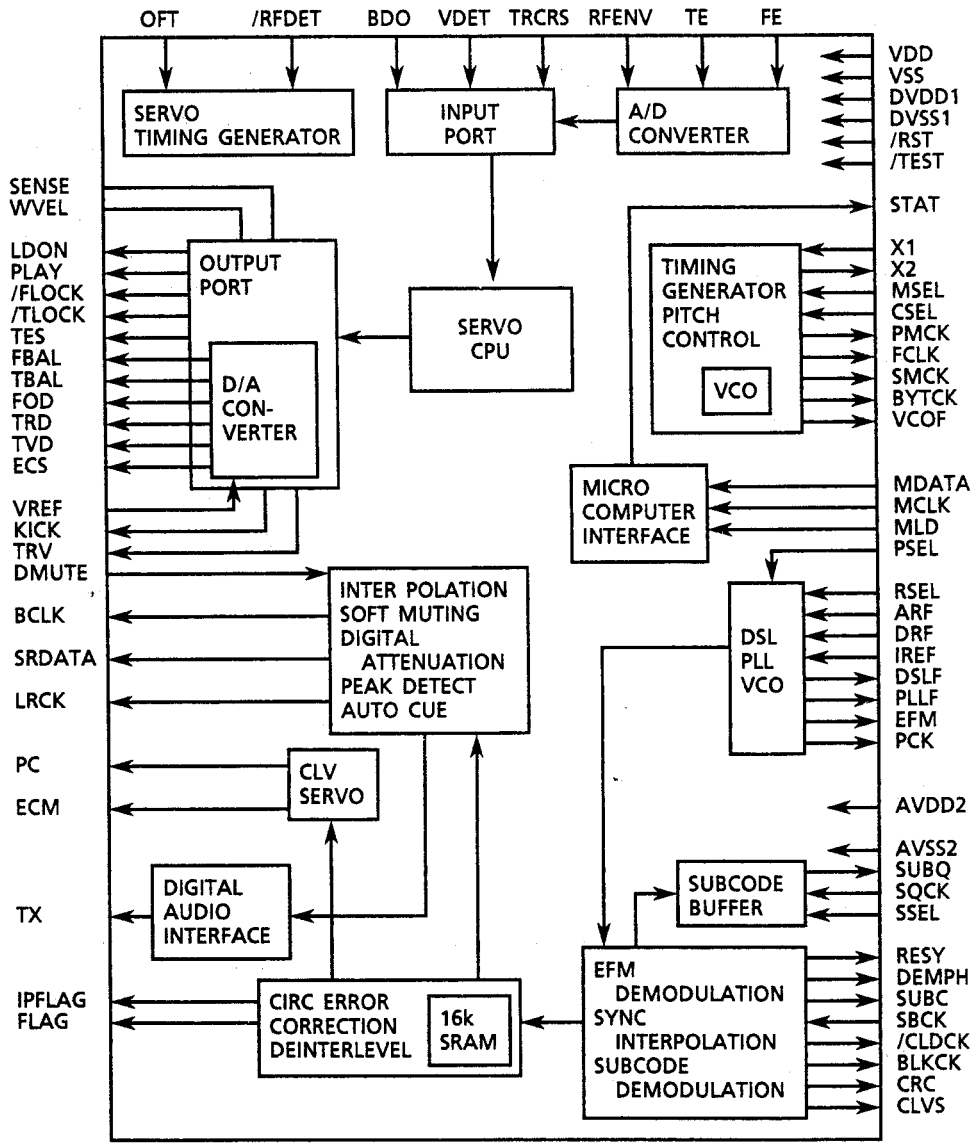
| Pin | symbol | I/O | Function and Operations | Pin | symbol | I/O | Function and Operations |
|---|---|---|---|---|---|---|---|
| 1 | VDD | -- | Power supply | 33 | KO5 | O | Key matrix output |
| 2 | KEYI0 | I | Key matrix input | 34 | TLOCK | I | Lock signal for Tracking |
| 3 | KEYI1 | I | Key matrix input | 35 | FLOCK | I | Lock signal for Focus |
| 4 | KEYI2 | I | Key matrix input | 36 | MLCK | O | µ-com command clock signal output |
| 5 | KEYI3 | I | Key matrix input | 37 | MLD | I | µ-com command load signal output |
| 6 | NC | -- | Non conection | 38 | MDATA | I | µ-com command data signal output |
| 7 | 11G | O | FL grid control output | 39 | DMUTE | O | Muting output(H; MUTE) |
| 8 | 10G | O | FL grid control output | 40 | SQCK | O | Clock output for Q-resistor |
| 9 | 9G | O | FL grid control output | 41 | SUBQ | I | Input Q-data of subcode |
| 10 | 8G | O | FL grid control output | 42 | NC | -- | Non conection |
| 11 | 7G | O | FL grid control output | 43 | RESET | I | Reset signal input |
| 12 | 6G | O | FL grid control output | 44 | STATAS | I | Statas signal input |
| 13 | 5G | O | FL grid control output | 45 | NC | -- | Non conection |
| 14 | 4G | O | FL grid control output | 46 | TEST | -- | Pull up (+5V) |
| 15 | 3G | O | FL grid control output | 47 | SENSE | I | Sense signal input |
| 16 | 2G | O | FL grid control output | 48 | RMIN | I | Remote contorole input |
| 17 | 1G | O | FL grid control output | 49 | R.SW | I | Rest sw on 'L' |
| 18 | -VDISP | -- | Power supply for FL Display | 50 | O.SW | I | Tray open 'L' |
| 19 | S1 | O | FL segment control output | 51 | C.SW | I | Tray close 'L' |
| 20 | S2 | O | FL segment control output | 52 | CLOSE | O | Tray close 'H' |
| 21 | S3 | O | FL segment control output | 53 | OPEN | O | Tray open 'H' |
| 22 | S4 | O | FL segment control output | 54 | L.RES | O | LSI Reset signal output |
| 23 | S5 | O | FL segment control output | 55 | NC | -- | Non conection |
| 24 | S6 | O | FL segment control output | 56 | P.OFFIND | I | Power OFF indication signal (OFF'H') |
| 25 | S7 | O | FL segment control output | 57 | P.ONIND | I | Power OFF indication signal ( ON 'H') |
| 26 | S8 | O | FL segment control output | 58 | DCSIN | I | DCS signal input |
| 27 | S9 | O | FL segment control output | 59 | DCSOUT | I | DCS signal output |
| 28 | K00 | O | Key matrix output | 60 | X1 | -- | Connected to GND |
| 29 | K01 | O | Key matrix output | 61 | X2 | -- | Non connection |
| 30 | K02 | O | Key matrix output | 62 | VSS | -- | GND |
| 31 | K03 | O | Key matrix output | 63 | OSC2 | -- | Clock oscillation input |
| 32 | K04 | O | Key matrix output | 64 | OSC1 | -- | Clock oscillation output |

## ■ MN662720RB (IC401) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSER

### 1. Terminal Layout




### 2. Block Diagram

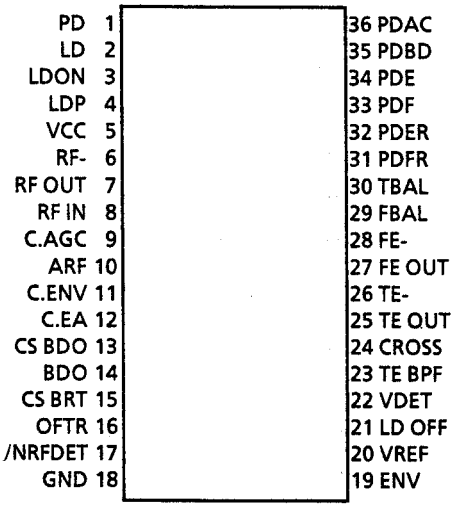


## 3. Description

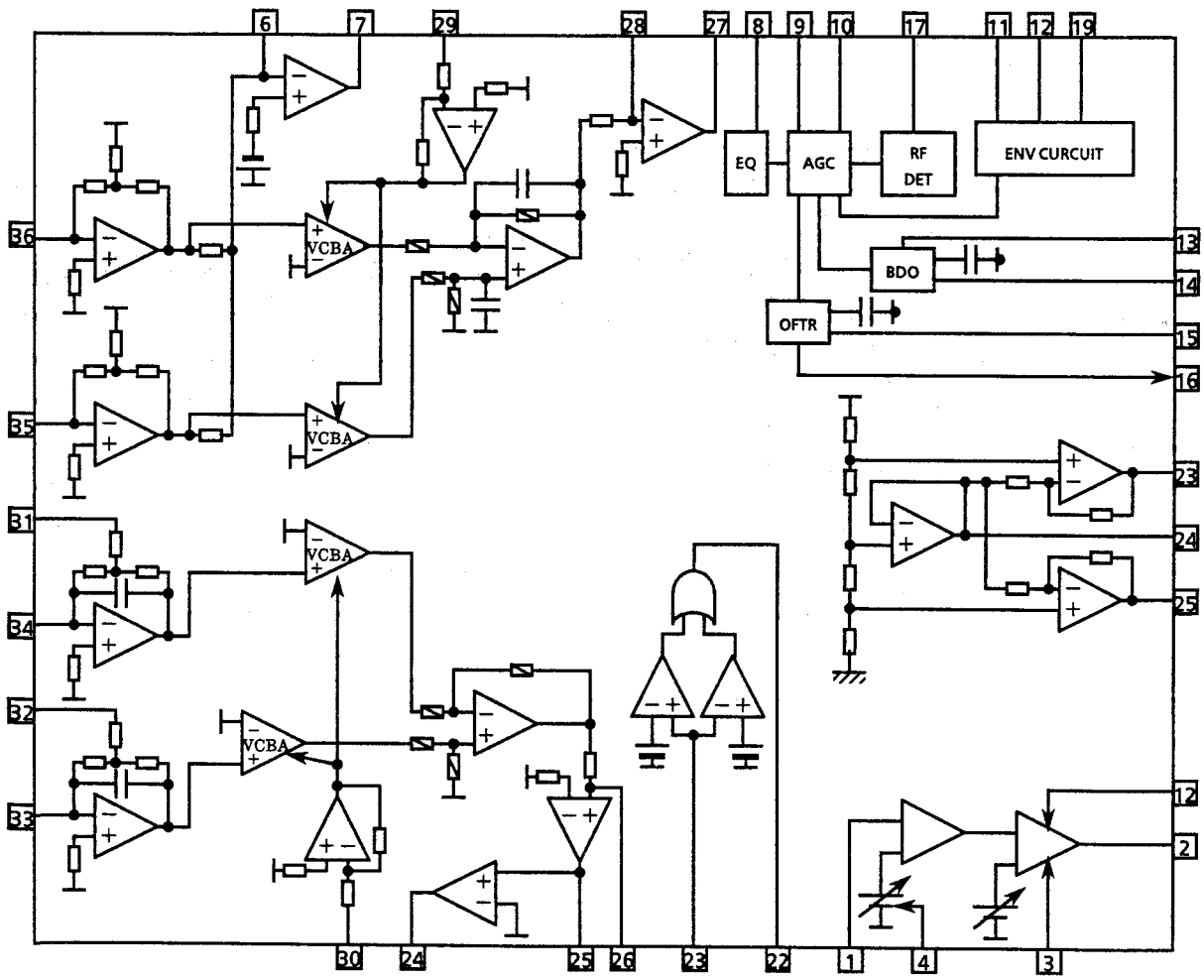
| Pin No. | symbol | I/O | Description | Pin No. | symbol | I/O | Description |
|---|---|---|---|---|---|---|---|
| 1 | BCLK | O | Bit clock output pin for SRDATA | 41 | TES | — | Not used |
| 2 | LRCK | O | L/R distinction signal | 42 | PLAY | — | 〃 |
| 3 | SRDATA | O | Serial data output | 43 | WVEL | — | 〃 |
| 4 | DVDD1 | — | Power supply | 44 | ARF | I | RF signal input |
| 5 | DVSS1 | — | Connected to GND | 45 | IREF | I | Reference current input pin |
| 6 | TX | O | Digital audio interface signal | 46 | DRF | I | Bias adjustment pin for DSL |
| 7 | MCLK | I | µ-com command clock signal input | 47 | DSLF | I/O | Loop filter pin for DSL |
| 8 | MDATA | I | µ-com command data input | 48 | PLLF | I/O | Loop filter pin for PLL |
| 9 | MLD | I | µ-com command load signal input | 49 | VCOF | — | Not used |
| 10 | SENSE | O | Sense signal output | 50 | AVDD2 | — | Power supply |
| 11 | FLOCK | O | Lock signal for Tracking | 51 | AVSS2 | — | Connected to GND |
| 12 | TLOCK | O | Lock signal for Focus | 52 | EFM | — | Not used |
| 13 | BLKCK | — | Not used | 53 | PCK | — | 〃 |
| 14 | SQCK | I | Clock for sub-code Q resister | 54 | PDO | — | 〃 |
| 15 | SUBQ | O | Sub-code Q-code output | 55 | SUBC | — | 〃 |
| 16 | DMUTE | I | Muting input (H : MUTE) | 56 | SBCK | — | Connected to GND |
| 17 | STATUS | O | Status signal | 57 | VSS | — | 〃 |
| 18 | /RST | I | Reset signal input (L:Reset) | 58 | X1 | I | Input of 16.9344MHz X'tal oscillation circuit |
| 19 | SMCK | — | Not used | 59 | X2 | — | Not used |
| 20 | PMCK | — | Not used | 60 | VDD | — | Power supply |
| 21 | TRV | O | Traverse enforced output | 61 | BYTCK | — | Not used |
| 22 | TVD | O | Traverse drive output | 62 | CLDCK | — | 〃 |
| 23 | PC | — | Not used | 63 | FCLK | — | 〃 |
| 24 | ECM | O | Spindle motor drive signal (Enforced output) 3-State | 64 | IPPLAG | — | 〃 |
| 25 | ECS | O | Spindle motor drive signal (Servo signal) | 65 | FLAG | — | 〃 |
| 26 | KICK | O | Kick pulse output | 66 | CLVS | — | 〃 |
| 27 | TRD | O | Tracking drive output | 67 | CRC | — | 〃 |
| 28 | FOD | O | Focus drive output | 68 | DEMPH | O | De-emphasis ON signal (H : ON) |
| 29 | VREF | I | Reference voltage input pin | 69 | RESY | — | Not used |
| 30 | FBAL | O | Focus Balance adjust signal output | 70 | RST 2 | — | Connected to GND |
| 31 | TBAL | O | Tracking Balance adjust signal output | 71 | /TEST | — | Pull up (+5V) |
| 32 | FE | I | Focus error signal input | 72 | AVDD1 | — | Power supply |
| 33 | TE | I | Tracking error signal input | 73 | OUT L | — | Not used |
| 34 | RF ENV | I | RF envelope signal input | 74 | AVSS1 | — | Connected to GND |
| 35 | VDET | I | Vibration detect signal input | 75 | OUT R | — | Not used |
| 36 | OFT | I | Off track signal input | 76 | RSEL | — | Pull up (+5V) |
| 37 | TRCRS | I | Track cross signal input | 77 | CSEL | — | Connected to GND |
| 38 | /RFDET | I | RF detect signal input | 78 | PSEL | — | 〃 |
| 39 | BDO | I | BDO input pin | 79 | MSEL | — | 〃 |
| 40 | LDON | O | Laser ON signal output | 80 | SSEL | — | Pull up (+5V) |

## ■ AN8806SB (IC501) : RF & SERVO AMP

### 1. Terminal Layout




### 2. Block Diagram

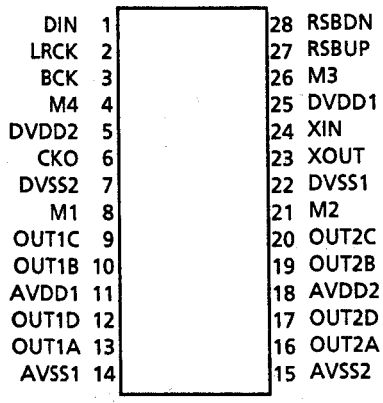


## 3. Description

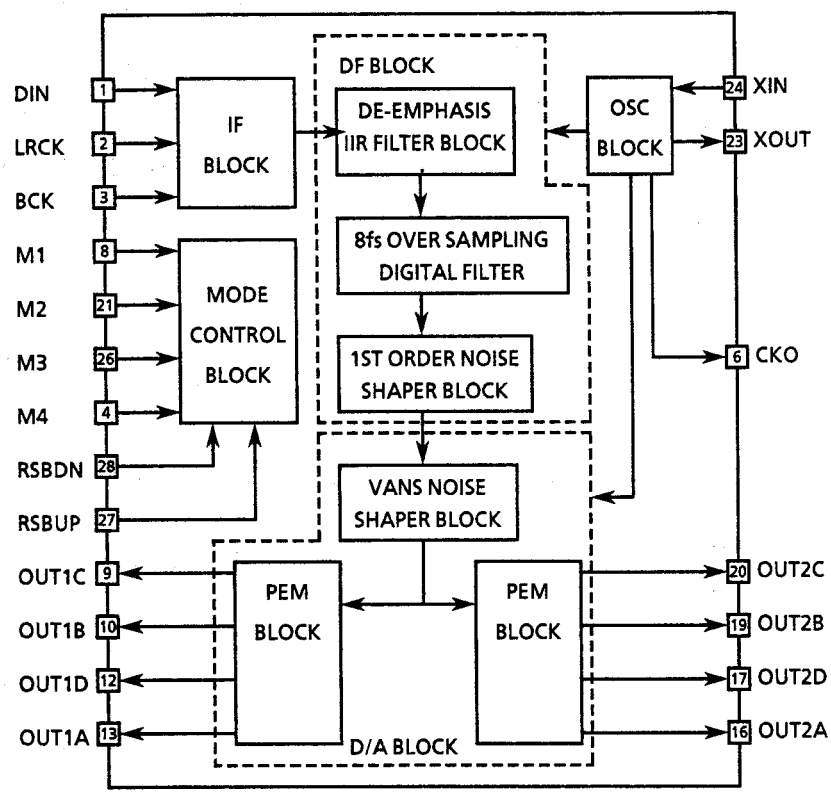
| Pin No. | Symbol | I/O | Description |
|---|---|---|---|
| 1 | PD | -- | Connected to GND |
| 2 | LD | -- | Non connection |
| 3 | LD ON | -- | Connected to GND |
| 4 | LDP | -- | Connected to GND |
| 5 | VCC | -- | Power supply |
| 6 | RF- | I | Inverse input pin for RF amp |
| 7 | RF OUT | O | RF amp output pin |
| 8 | RF IN | I | AGC input pin |
| 9 | C.AGC | I/O | Connecting pin of AGC loop filter |
| 10 | ARF | O | AGC output pin |
| 11 | C.ENV | I/O | A capacitor is connected to this terminal to detect the envelope of RF signal |
| 12 | C.EA | I/O | A capacitor is connected to this terminal to detect the envelope of RF signal |
| 13 | CS BDO | I/O | A capacitor is connected to detect the lower envelope of the RF signal |
| 14 | BDO | O | BDO output pin |
| 15 | CS BRT | I/O | A capacitor is connected to detect the lower envelope of the RF signal |
| 16 | OFTR | O | Of-track status signal output pin |
| 17 | /NRFDET | O | RF detection signal output pin |
| 18 | GND | -- | GND |
| 19 | ENV | O | Envelope output |
| 20 | VREF | O | Reference voltage output pin |
| 21 | LD OFF | -- | Connect to GND |
| 22 | VDET | O | Vibration detection signal output pin |
| 23 | TE BPF | I | Input pin of tracking error through BPF |
| 24 | CROSS | O | Tracking error cross output pin |
| 25 | TE OUT | O | Tracking error signal output pin |
| 26 | TE- | I | Inverse input pin for tracking error amp |
| 27 | FE OUT | O | Output pin of focus error |
| 28 | FE- | I | Inverse input pin for focus error amp |
| 29 | FBAL | I | Focus balance control pin |
| 30 | TBAL | I | Tracking balance control pin |
| 31 | PDFR | I/O | E and E I-V amp gain control pin |
| 32 | PDER | I/O | F and E I-V amp gain control pin |
| 33 | PDF | I | I-V amp input pin |
| 34 | PDE | I | I-V amp input pin |
| 35 | PD BD | I | I-V amp input pin |
| 36 | PD AC | I | I-V amp input pin |

## ■ MN35502(IC301) : D / A CONVERTER

### 1. Terminal Layout




### 2. Block Diagram

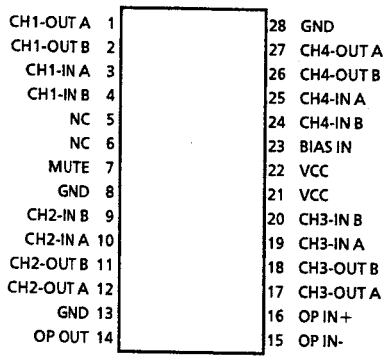



### 3.Description

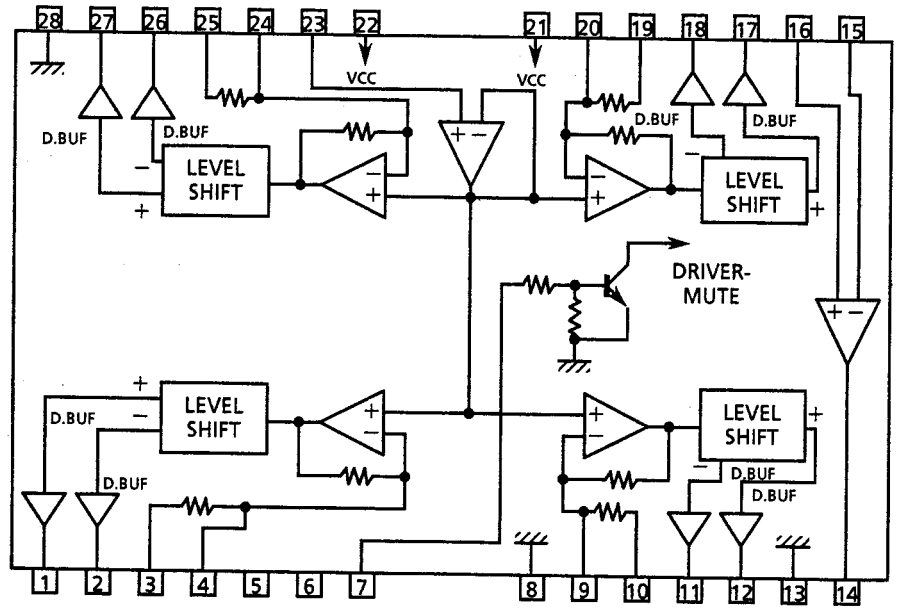
| Pin No | Symbol | I/O | Description | Pin No | Symbol | I/O | Description |
|---|---|---|---|---|---|---|---|
| 1 | DIN | I | Data input | 15 | AVSS2 | -- | Analog ground 2 |
| 2 | LRCK | I | LR clock input | 16 | OUT2A | O | 2A PEM output |
| 3 | BCK | I | Bit clock input | 17 | OUT2D | O | 2D PEM output |
| 4 | M4 | I | Operational mode control 4 | 18 | AVDD2 | -- | Analog power supply 2 |
| 5 | DVDD2 | -- | Digital power supply 2 | 19 | OUT2B | O | 2B PEM output |
| 6 | CKO | I | Clock output | 20 | OUT2C | O | 2C PEM output |
| 7 | DVSS2 | -- | Digital ground 2 | 21 | M2 | -- | Connected to ground |
| 8 | M1 | -- | Connected to ground | 22 | DVSS1 | -- | Digital ground pin 1 |
| 9 | OUT1C | O | 1C PEM output | 23 | XOUT | O | Crystal oscillator output |
| 10 | OUT1B | O | 1B PEM output | 24 | XIN | I | Crystal oscillator input |
| 11 | AVDD1 | -- | Analog power supply 1 | 25 | DVDD1 | -- | Digital power supply 1 |
| 12 | OUT1D | O | 1D PEM output | 26 | M3 | -- | Connected to ground |
| 13 | OUT1A | O | 1A PEM output | 27 | RSBUP | -- | Connected to ground |
| 14 | AVSS1 | -- | Analog ground 1 | 28 | RSBDN | I | Reset signal / Digital Att. control signal input |

## ■ BA6398FP(IC801) : BTL DRIVER

### 1. Terminal Layout




### 2. Block Diagram




### 3.Description

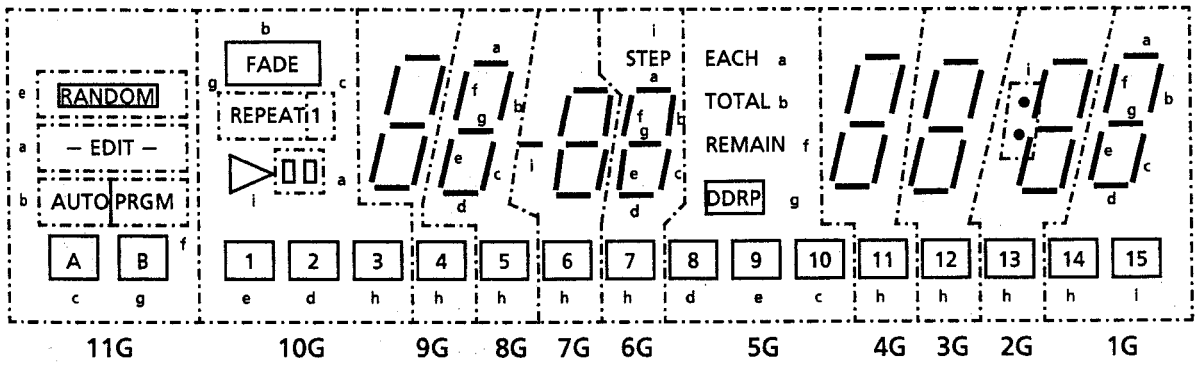
| Pin No. | Symbol | I/O | Description |
|---|---|---|---|
| 1<br>2 | CH1-OUT A<br>CH1-OUT B | O | Focus drive output |
| 3 | CH1-IN A | I | Focus drive input |
| 4<br>5,6<br>10<br>19<br>24 | CH1-IN B<br>NC<br>CH2-IN A<br>CH3-IN A<br>CH4-IN B | — | Non connection |
| 7 | MUTE | I | Mute signal input pin |
| 9<br>20 | CH2-IN B<br>CH3-IN B | I<br>I | Spindle motor drive input<br>Feed motor drive input |
| 25 | CH4-IN A | I | Tracking drive input |

| Pin No. | Symbol | I/O | Description |
|---|---|---|---|
| 8,13,28 | GND | — | GND |
| 11<br>12 | CH2-OUT B<br>CH2-OUT A | O | Spindle motor drive output |
| 14 | OP OUT | O | OP amp output |
| 15,16 | OP IN | I | OP amp input |
| 17<br>18 | CH3-OUT A<br>CH3-OUT B | O | Feed motor drive output |
| 21,22 | Vcc | — | Power supply |
| 23 | BIAS IN | I | Input pin of Bias |
| 26<br>27 | CH4-OUT B<br>CH4-OUT A | O | Tracking drive output |

# *Internal Connection of the Display*

■ ELU0001-114: FL TUBE(FL201)

## 1. Grid Layout




## 2. Pin Connection

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electrode | F1 | F1 | NP | NC | 11G | 10G | 9G | 8G | 7G | 6G | 5G | P (i) | 4G | 3G | 2G | 1G | P (a) | P (b) | P (f) |

| Pin No. | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electrode | P (g) | P (c) | P (e) | P (d) | P (h) | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NP | F2 | F2 |

Note · · · · F : Filament, G : Grid, a~i : Element, NP : No pin, NC : No connection

# Disassembly Procedures

(1) Top cover removal
1. Remove 2 screws Ⓐon the rear side and 4 screws Ⓑ on both sides of the cover.
2. Remove the cover.

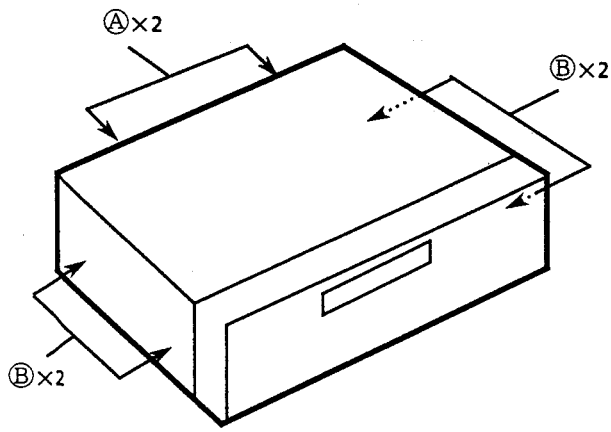



Fig1

(2) Rear panel removal
1. Remove the top cover.
2. Remove the 6screws Ⓒ.
3. Remove the rear panel.

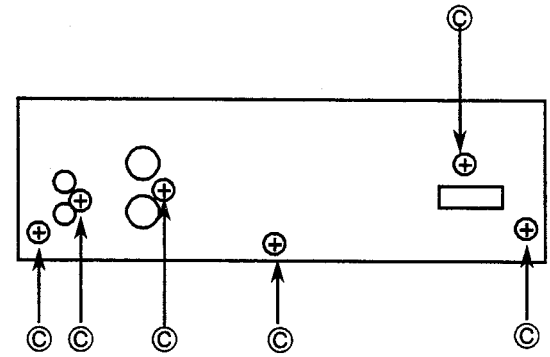



Fig2 Rear view

(3) Tray assembly removal
1. Remove the top cover.
2. Remove the screw Ⓓ.
3. Lotate the screw located under the mechanism to remove the tray out of the loading mecha.
4. Remove the tray.

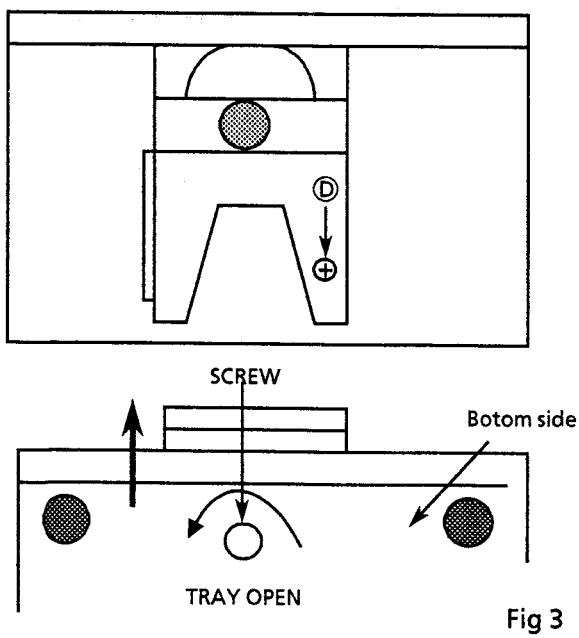



Fig 3

(4) CD mecha Ass'y removal
1. Do the (1)(3).
2. Disconnect the P102,P103,P104.
3. Remove the 2 screws Ⓓto remove the clamp assembly.
4. Remove the 3 screws Ⓔ to remove the CD mecha Ass'y.

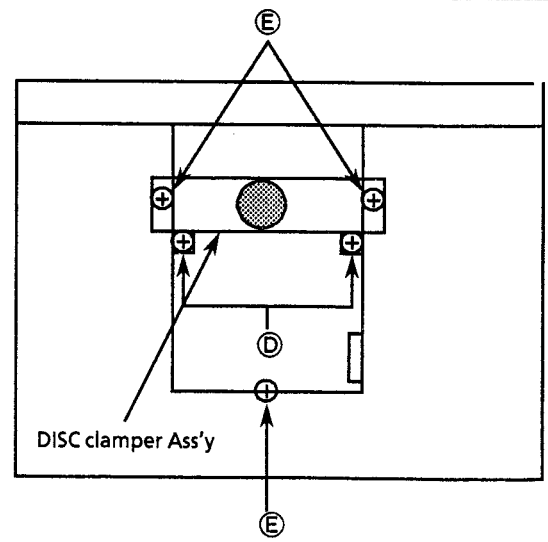



Fig 4 Top view

Ⓐ SDST3008M Ⓑ E406308-001 Ⓒ E73273-006 . Ⓓ SBSF3008M Ⓔ SBST3020Z

(5) Front panel assembly removal
1. Do the (1) (3).
2 Remove the 3screw Ⓕ on the bottom of the front panel.
3 Remove the connectorJ202,P105,P301.
4 Remove front panel assembly.

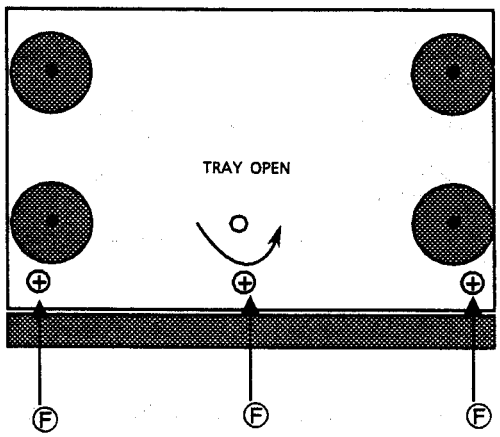



Fig 5 Bottom view

(6) CD Main PCB(ENN-427-2) removal
1. De the (1) (2).
2. Remove the conector J202,P301.107 and P102,P103,P104.
3. Remove the screwⒺ and 3screws Ⓖ.
4. Remove the Main PCB

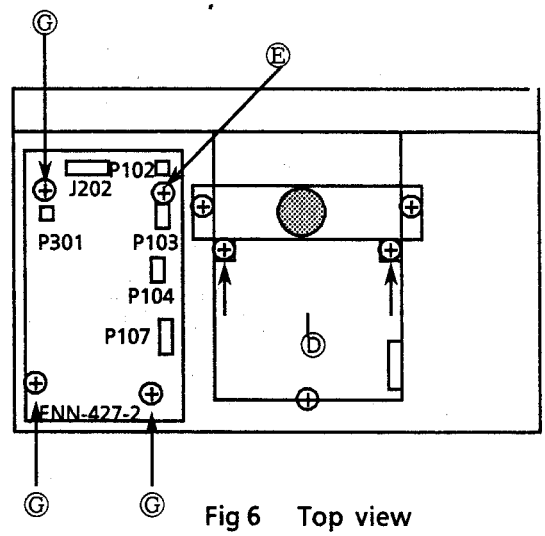



Fig 6 Top view

(7) Front PCB(ENN-427-3~5) removal
1. De the (1)(3)(5).
2. Remove the Front panel ass'y.
3. Remove the 14 screws Ⓗ.
4. Remove the Front PCB.

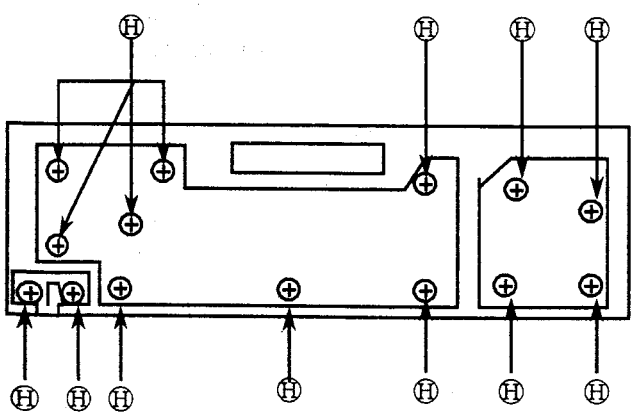



Fig 7 Front PCB view

(8) InstallingCD mecha. tray
1. Insert the CDmecha.tray after checking that the traverse mecha.is slanting(See Fig8).
2. If it is up mode,press the cam plate until it stops so that the traverse mech.slants.(See an arrow in the following figure.)

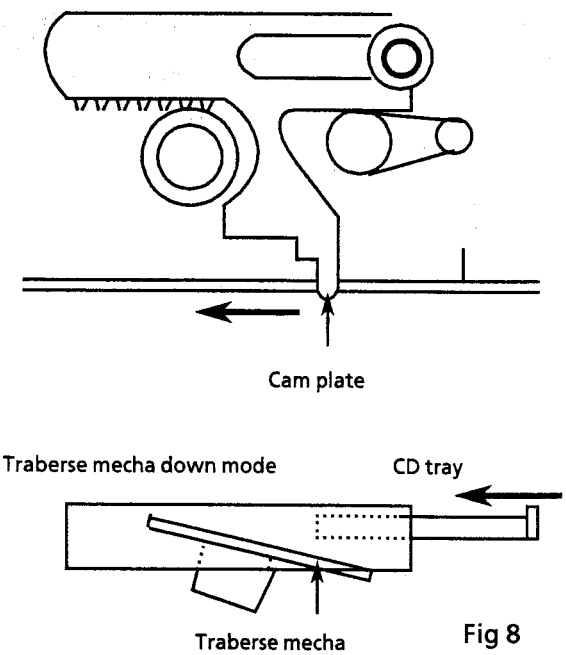



Fig 8

Ⓔ .. SBST3020Z Ⓕ ... SBSG3008M Ⓖ ... SBST3006M Ⓗ .. SDSF2608Z

(9) Pickup removal
1. Remove the CD mechanism assembly.
2. Release the shaft to remove the pickup (See an arrowFig 9).

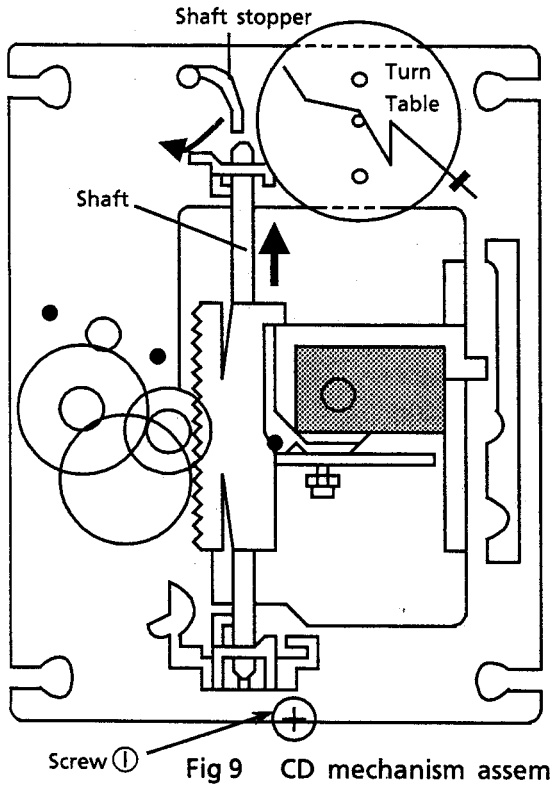



Fig 9 CD mechanism assembly

(10) Spindle motor removal
1. Remove the cd mechanism assembly.
2. Remove the turntable, and remove the two screws retaining the spindle motor.
3. Remove the screws retaining the spindle and feed motor P.C. Board and unsolder it.

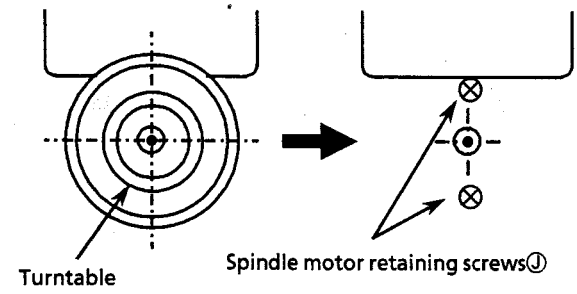



Fig 10

(11) Spindle motor installation
1. Tighten the 2 screws to the same torque.
2. Fasten the spindle and feed motor P.C. board with the screw and solder.
3. Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the turntable is exactly 19.4±0.1mm.

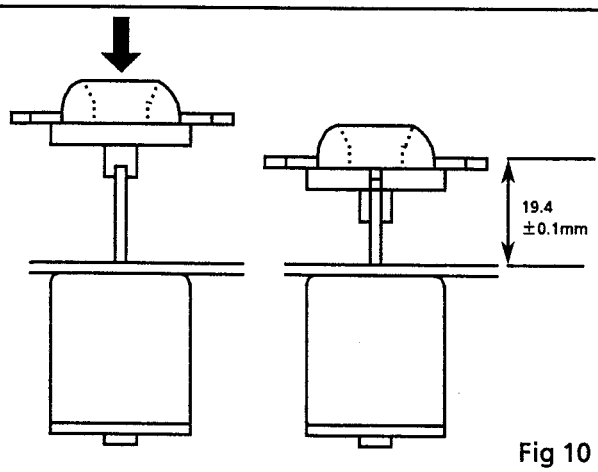



Fig 10

(12) After inserting the turntable, bond the motor shaft and turntable together (at the section marked by a broken line arrow in fig 12 on the left below).

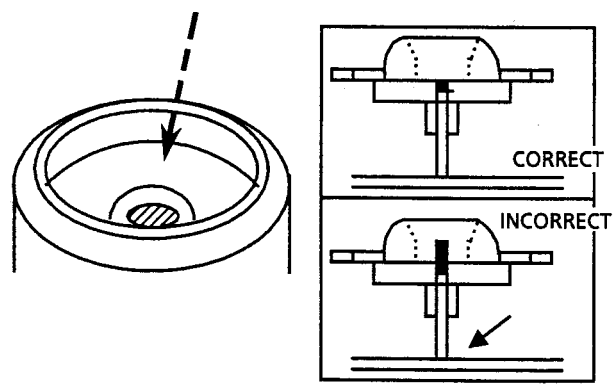
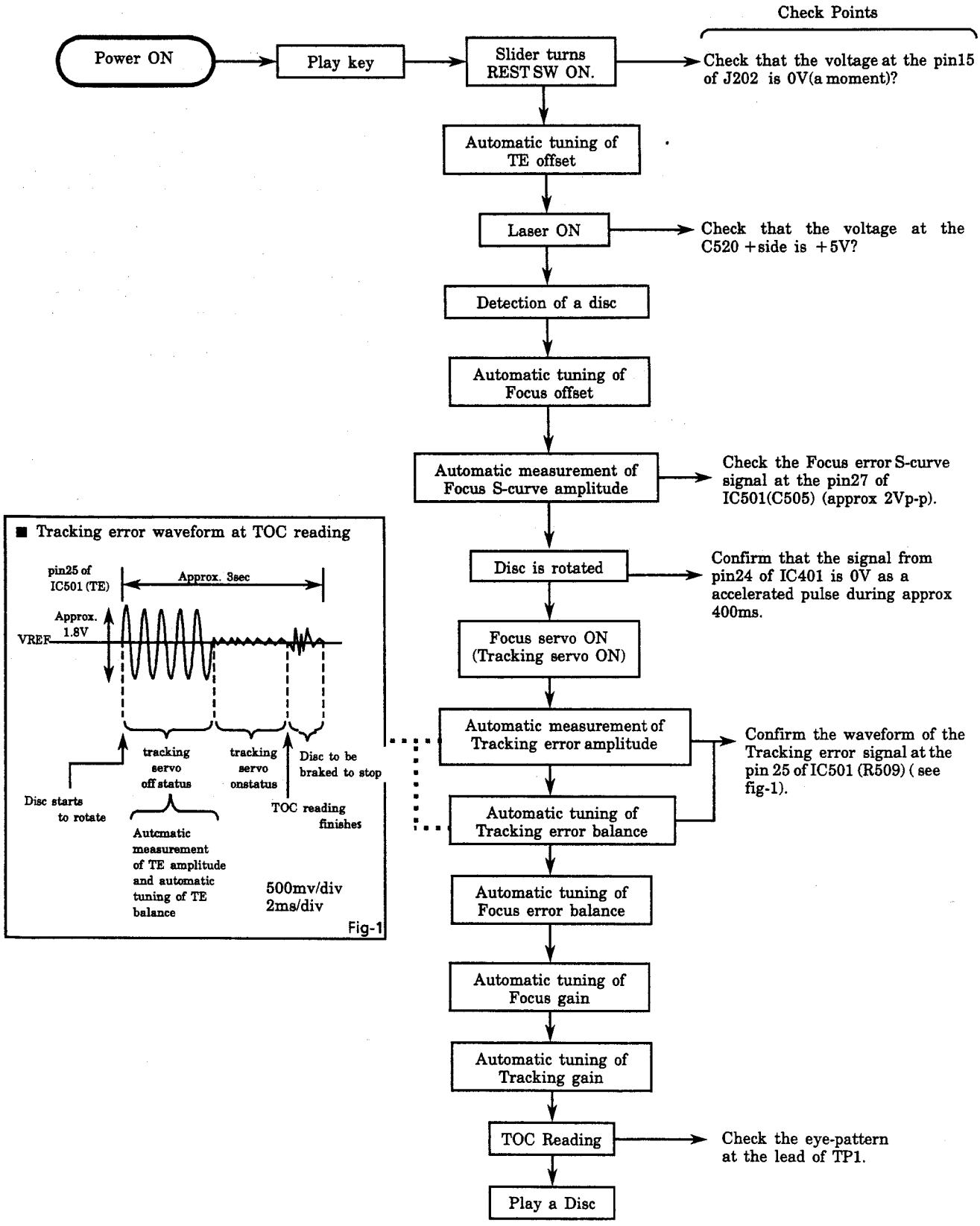



Fig 12

(13) Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in fig 12 on the right).

Ⓘ .. E406293-001 Ⓙ ... SDSP2003N

# Flow of Functional Operation Until TOC is Read


Check Points
Power ON
Play key
Slider turns REST SW ON.
Check that the voltage at the pin15 of J202 is 0V(a moment)?
Automatic tuning of TE offset
Laser ON
Check that the voltage at the C520 +side is +5V?
Detection of a disc
Automatic tuning of Focus offset
Automatic measurement of Focus S-curve amplitude
Check the Focus error S-curve signal at the pin27 of IC501(C505) (approx 2Vp-p).
Disc is rotated
Confirm that the signal from pin24 of IC401 is 0V as a accelerated pulse during approx 400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Confirm the waveform of the Tracking error signal at the pin 25 of IC501 (R509) ( see fig-1).
Automatic tuning of Tracking error balance
Automatic tuning of Focus error balance
Automatic tuning of Focus gain
Automatic tuning of Tracking gain
TOC Reading
Check the eye-pattern at the lead of TP1.
Play a Disc
■ Tracking error waveform at TOC reading
pin25 of IC501 (TE)
Approx. 3sec
Approx. 1.8V
VREF
tracking servo off status
tracking servo onstatus
Disc to be braked to stop
Disc starts to rotate
TOC reading finishes
Autcmatic measurement of TE amplitude and automatic tuning of TE balance
500mv/div
2ms/div
Fig-1

# Maintenance of Laser Pickup

### (1) Cleaning the pick up lens

Before you replace the pickup, please try to clean the lens with a alcohol soaked cotton swab.

### (2) Life of the laser diode

RF level ( amplitude of eye pattern ) is decreased when the life of laser diode is run out.

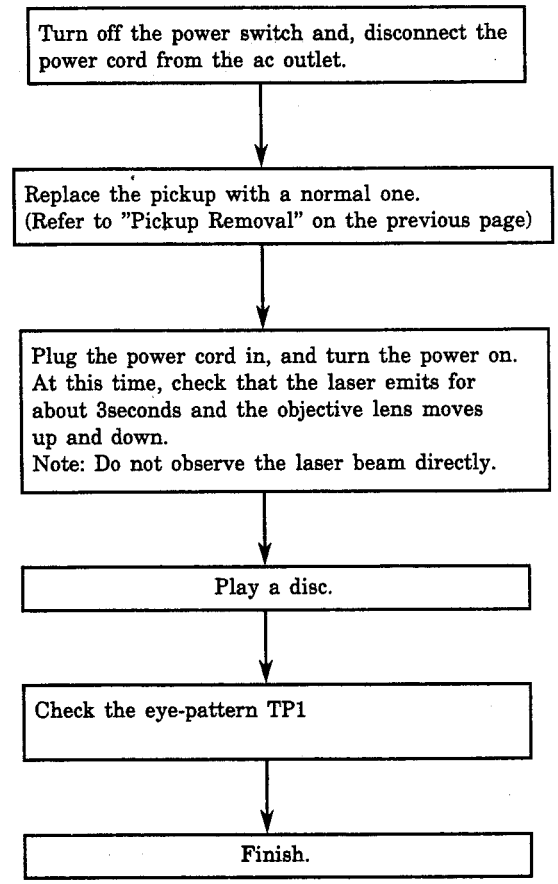
Check that the RF level is over 0.7Vp-p and under 1.2V.

The pickup should be exchanged with new one for run out of its life if the value is 0.7Vp-p below.

### (3) Semi-fixed resistor on the APC PC board

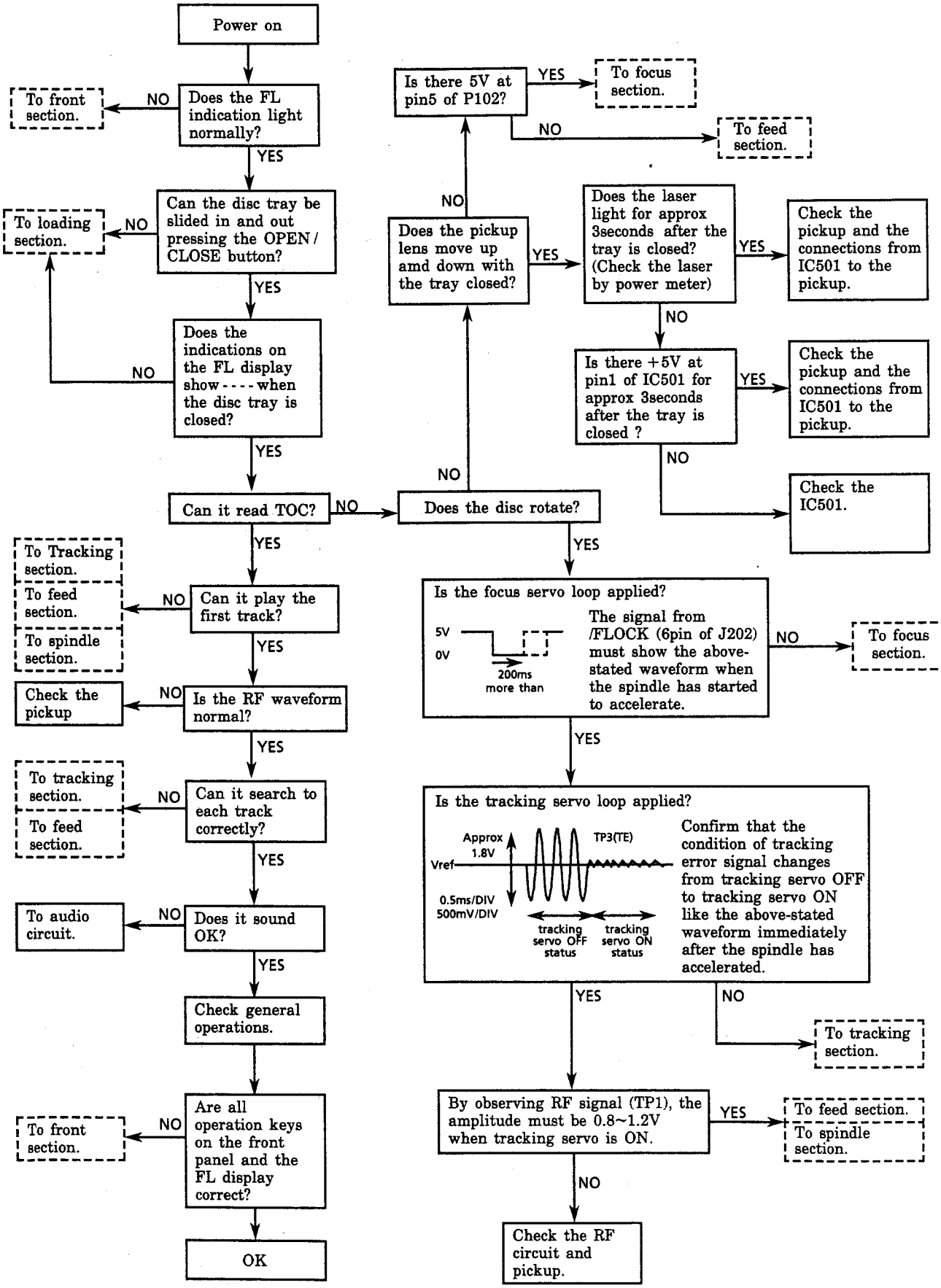
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

# Replacement of Laser Pickup

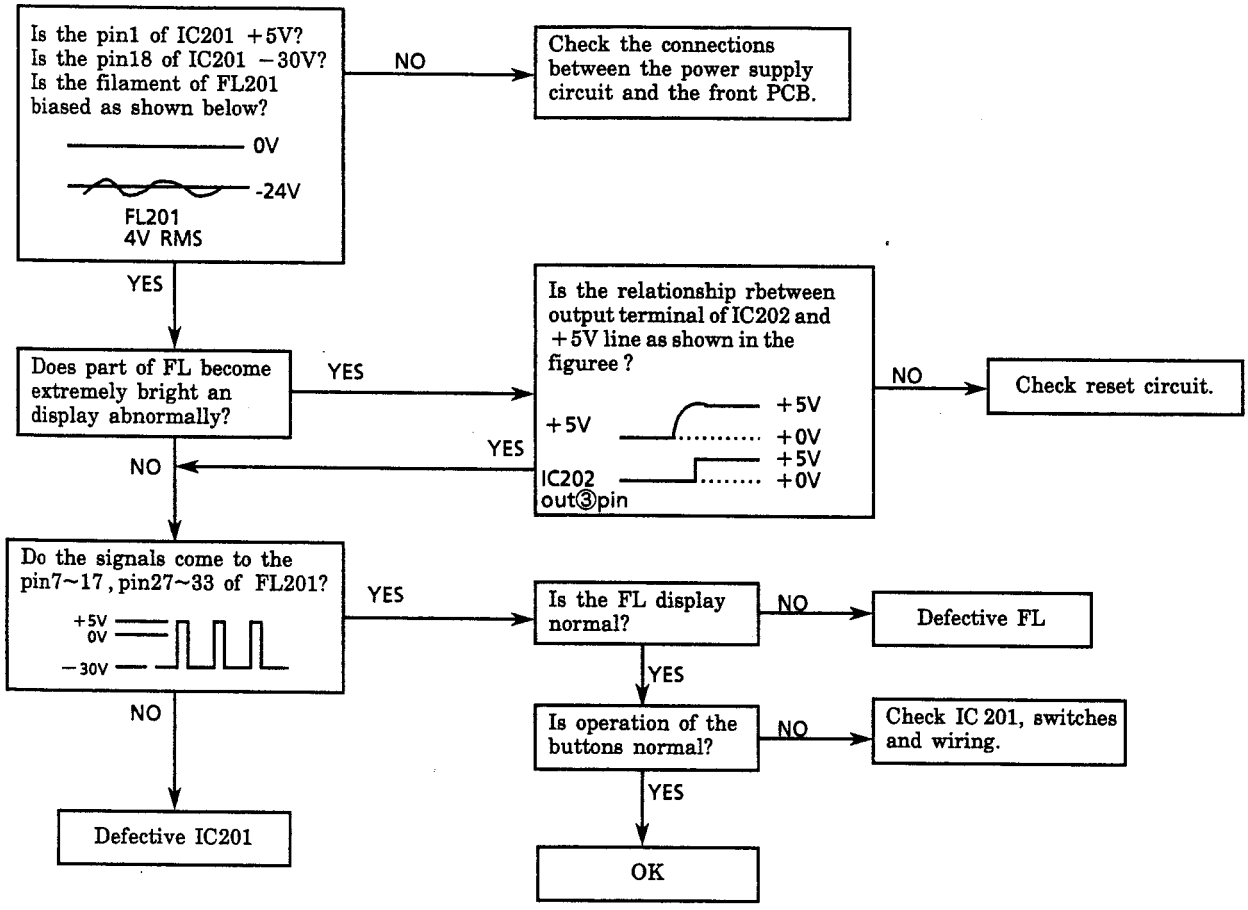

Turn off the power switch and, disconnect the power cord from the ac outlet.
Replace the pickup with a normal one.
(Refer to "Pickup Removal" on the previous page)
Plug the power cord in, and turn the power on.
At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern TP1
Finish.

# Troubleshooting

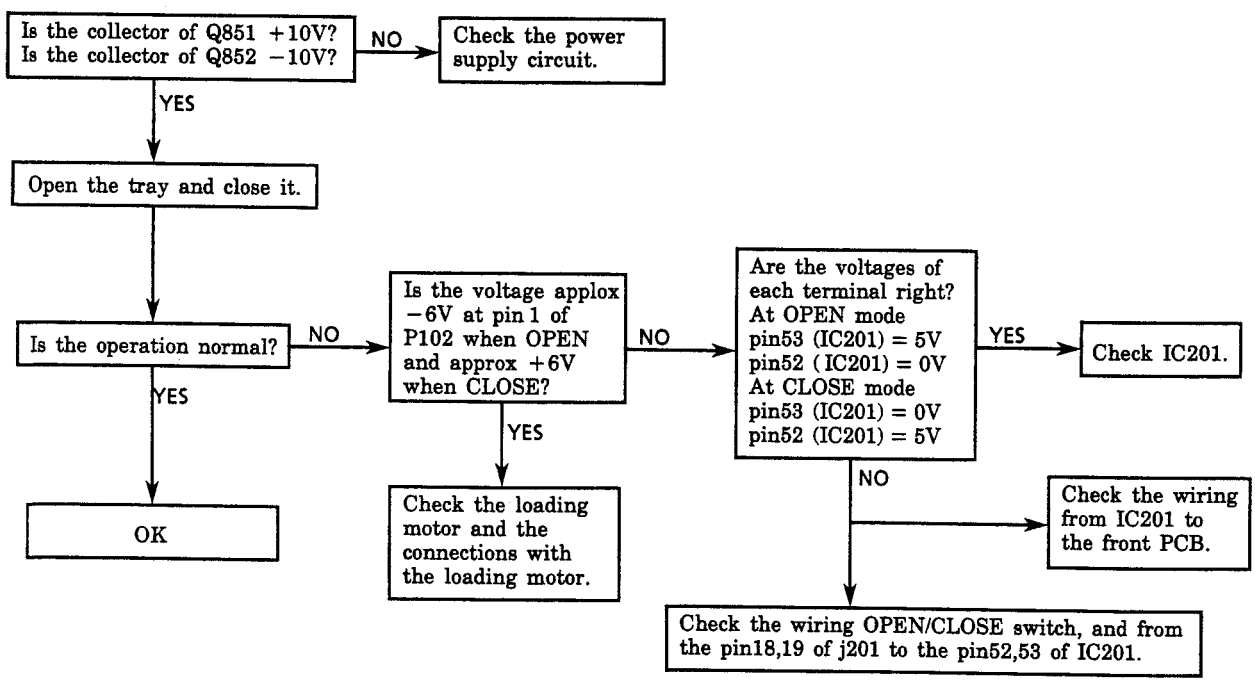
The following shows the status of the various circuits from turning on the power to the start of disc play.


Power on
Does the FL indication light normally?
NO
To front section.
YES
Can the disc tray be slided in and out pressing the OPEN / CLOSE button?
NO
To loading section.
YES
Does the indications on the FL display show - - - - when the disc tray is closed?
NO
YES
Can it read TOC?
NO
Does the disc rotate?
NO
YES
Can it play the first track?
NO
To Tracking section.
To feed section.
To spindle section.
YES
Is the RF waveform normal?
NO
Check the pickup
YES
Can it search to each track correctly?
NO
To tracking section.
To feed section.
YES
Does it sound OK?
NO
To audio circuit.
YES
Check general operations.
Are all operation keys on the front panel and the FL display correct?
NO
To front section.
OK
Is there 5V at pin5 of P102?
YES
To focus section.
NO
To feed section.
Does the pickup lens move up amd down with the tray closed?
NO
YES
Does the laser light for approx 3seconds after the tray is closed? (Check the laser by power meter)
YES
Check the pickup and the connections from IC501 to the pickup.
NO
Is there +5V at pin1 of IC501 for approx 3seconds after the tray is closed ?
YES
Check the pickup and the connections from IC501 to the pickup.
NO
Check the IC501.
YES
Is the focus servo loop applied?
5V
0V
200ms more than
The signal from /FLOCK (6pin of J202) must show the above-stated waveform when the spindle has started to accelerate.
NO
To focus section.
YES
Is the tracking servo loop applied?
Approx 1.8V
Vref
TP3(TE)
0.5ms/DIV
500mV/DIV
tracking servo OFF status
tracking servo ON status
Confirm that the condition of tracking error signal changes from tracking servo OFF to tracking servo ON like the above-stated waveform immediately after the spindle has accelerated.
YES
NO
To tracking section.
By observing RF signal (TP1), the amplitude must be 0.8~1.2V when tracking servo is ON.
YES
To feed section.
To spindle section.
NO
Check the RF circuit and pickup.

## Front Section

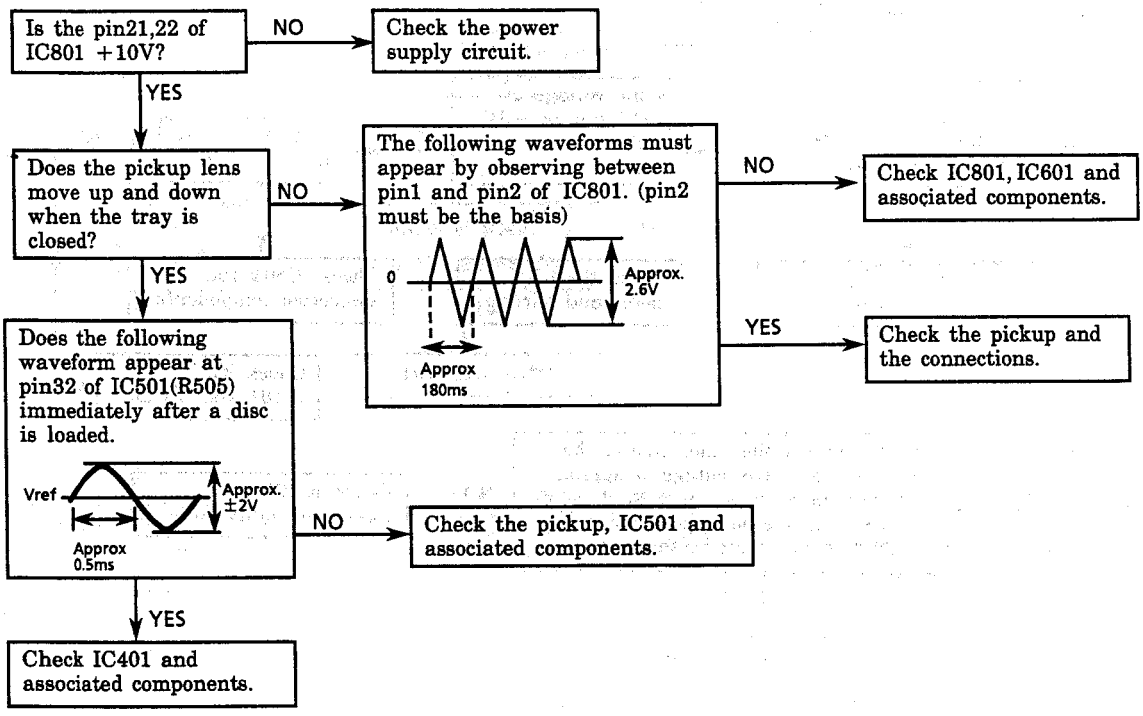



## Loading section

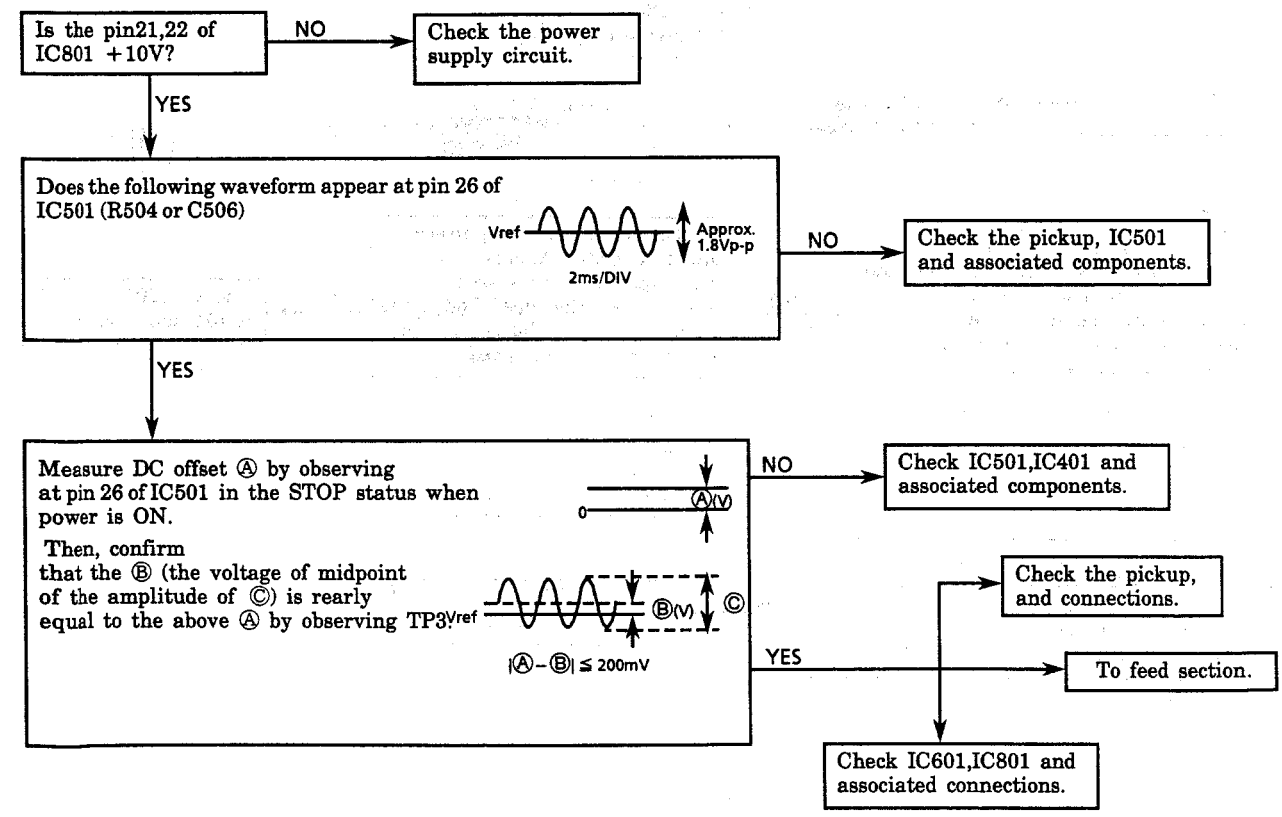

Is the collector of Q851 +10V?
Is the collector of Q852 −10V?
NO
Check the power supply circuit.
YES
Open the tray and close it.
Is the operation normal?
NO
Is the voltage applox −6V at pin 1 of P102 when OPEN and approx +6V when CLOSE?
NO
Are the voltages of each terminal right?
At OPEN mode
pin53 (IC201) = 5V
pin52 (IC201) = 0V
At CLOSE mode
pin53 (IC201) = 0V
pin52 (IC201) = 5V
YES
Check IC201.
YES
OK
YES
Check the loading motor and the connections with the loading motor.
NO
Check the wiring from IC201 to the front PCB.
Check the wiring OPEN/CLOSE switch, and from the pin18,19 of j201 to the pin52,53 of IC201.

## Focus section

Note) When checking the voltages between pin1 and pin2 of IC801 with an oscilloscope, do not connect the other probes.

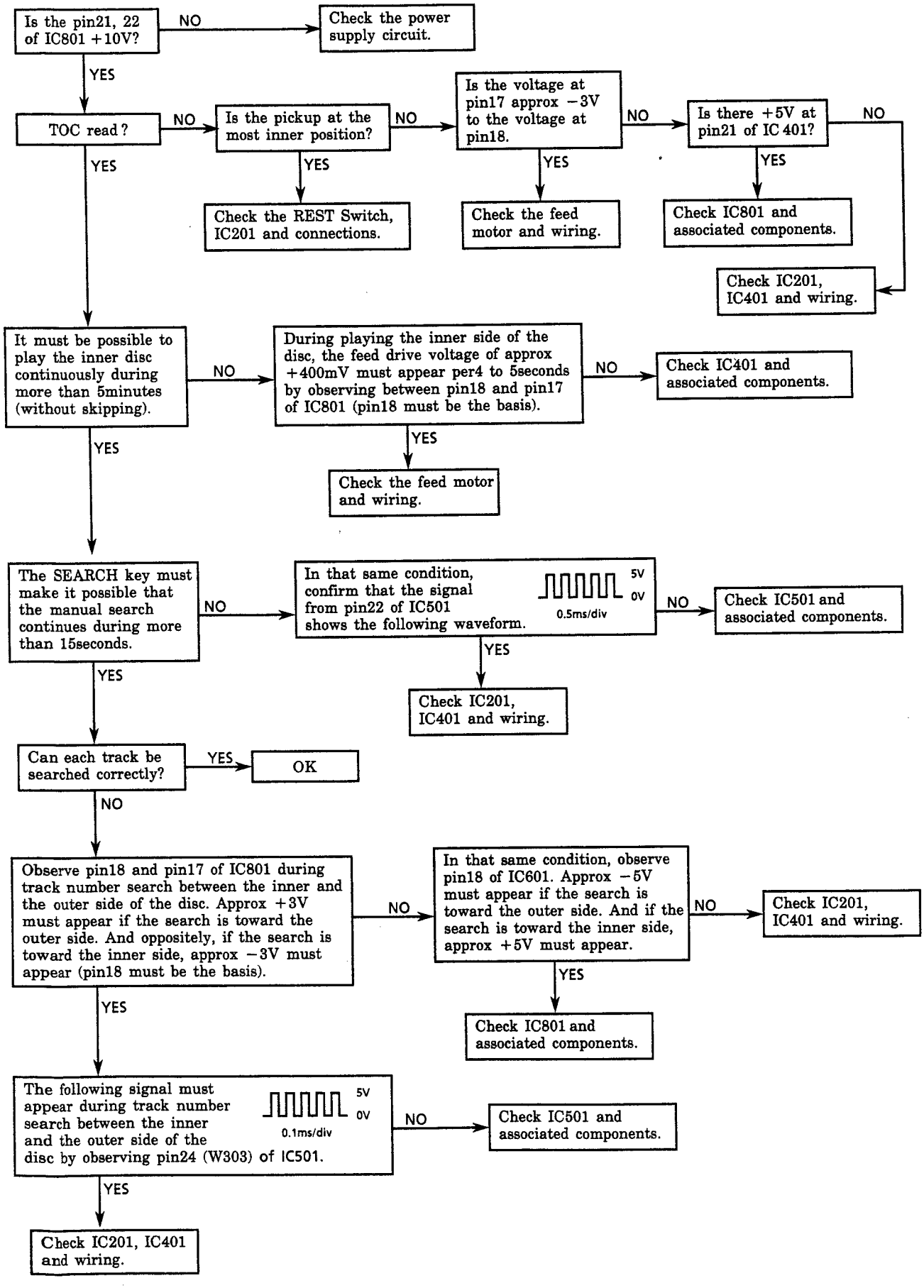

Is the pin21,22 of IC801 +10V?
NO
Check the power supply circuit.
YES
Does the pickup lens move up and down when the tray is closed?
NO
The following waveforms must appear by observing between pin1 and pin2 of IC801. (pin2 must be the basis)
0
Approx. 2.6V
Approx 180ms
NO
Check IC801, IC601 and associated components.
YES
Check the pickup and the connections.
YES
Does the following waveform appear at pin32 of IC501(R505) immediately after a disc is loaded.
Vref
Approx. ±2V
Approx 0.5ms
NO
Check the pickup, IC501 and associated components.
YES
Check IC401 and associated components.

## Tracking section


Is the pin21,22 of IC801 +10V?
NO
Check the power supply circuit.
YES
Does the following waveform appear at pin 26 of IC501 (R504 or C506)
Vref
Approx. 1.8Vp-p
2ms/DIV
NO
Check the pickup, IC501 and associated components.
YES
Measure DC offset Ⓐ by observing at pin 26 of IC501 in the STOP status when power is ON.
Then, confirm that the Ⓑ (the voltage of midpoint of the amplitude of Ⓒ) is rearly equal to the above Ⓐ by observing TP3Vref
0
Ⓐ(V)
Ⓑ(V)
Ⓒ
|Ⓐ−Ⓑ| ≤ 200mV
NO
Check IC501,IC401 and associated components.
YES
Check the pickup, and connections.
To feed section.
Check IC601,IC801 and associated connections.

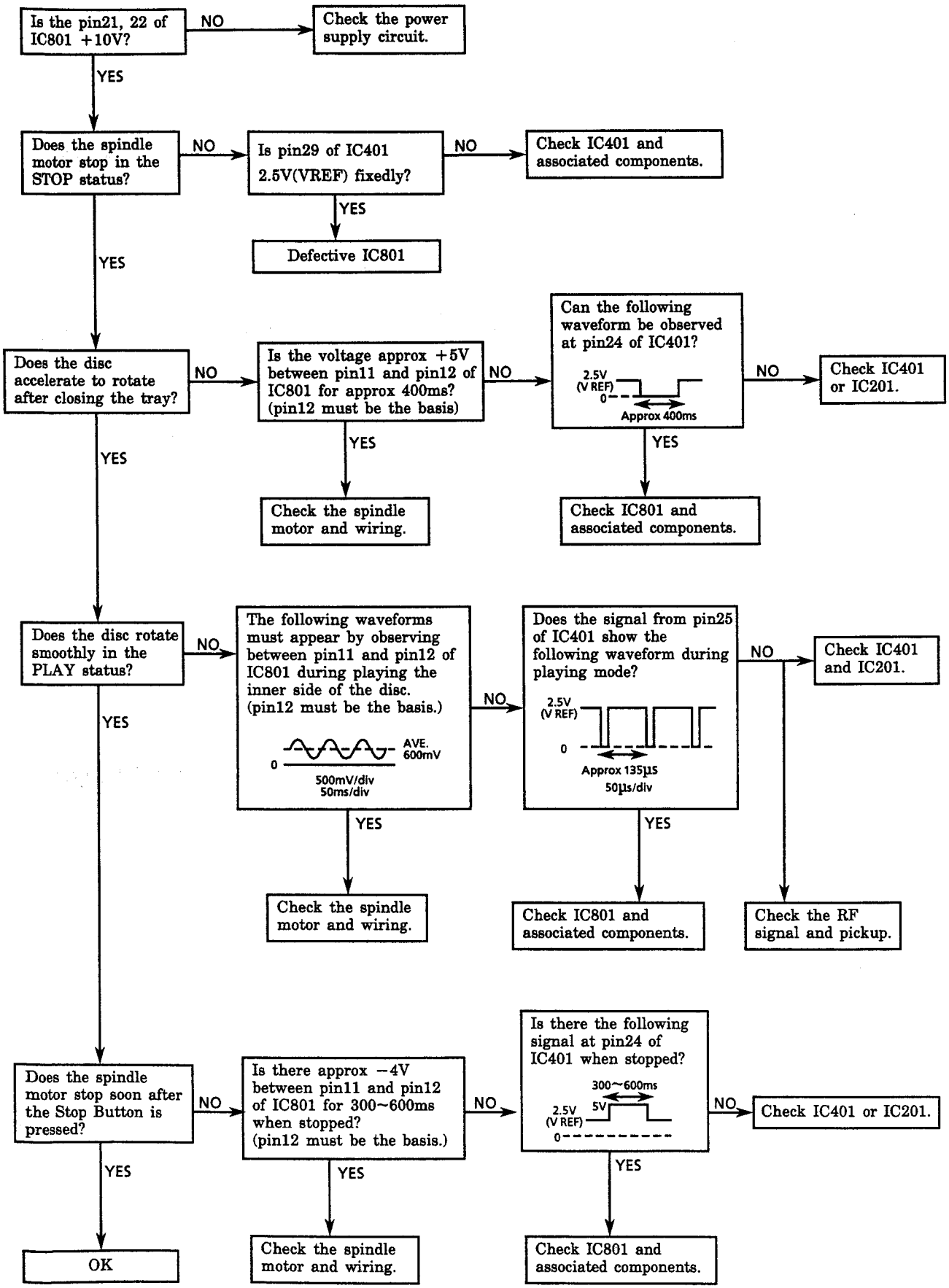
## *Feed section*

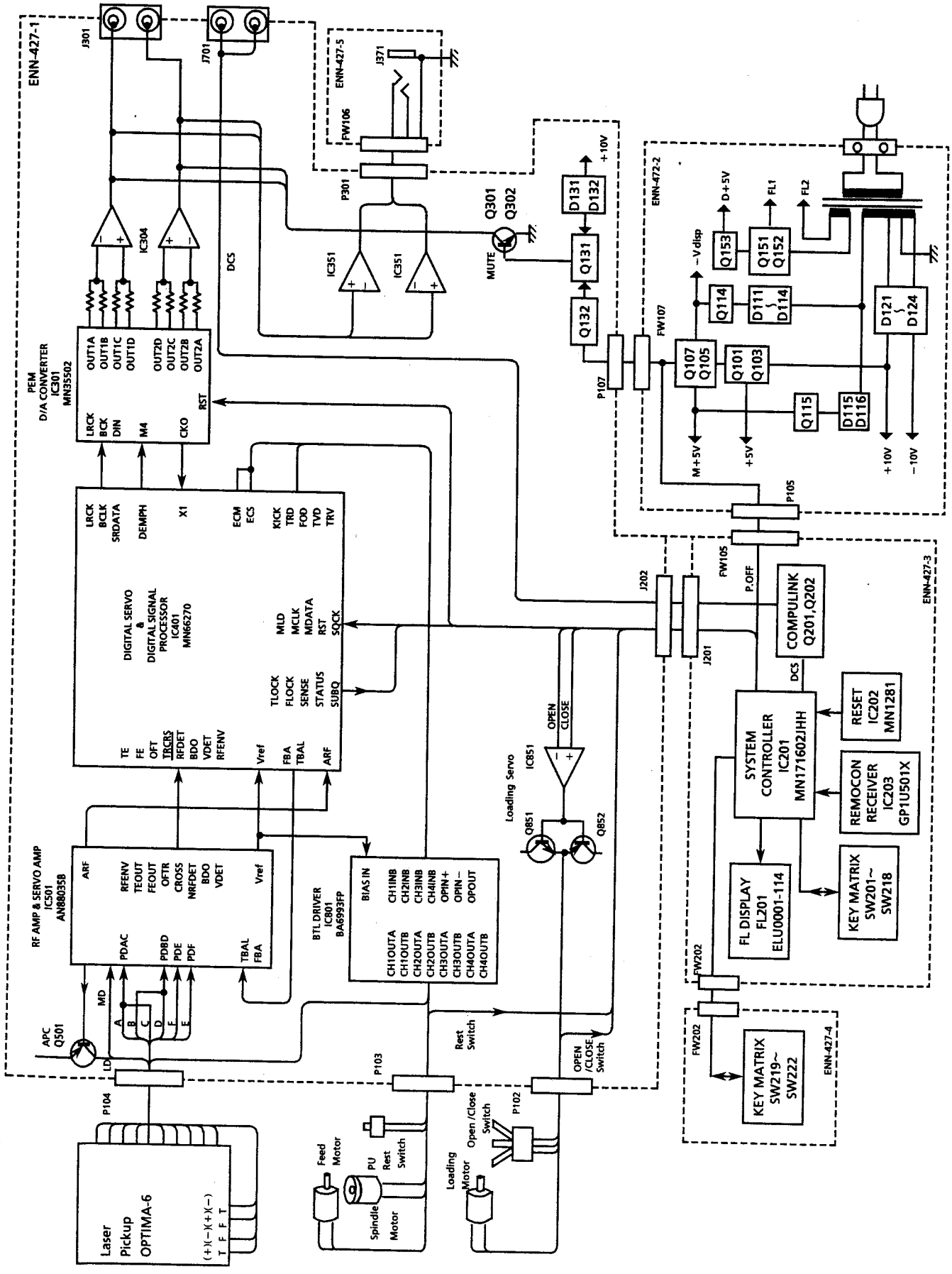
Note) When checking the voltages between pin18 and pin17 of IC801 with an oscilloscope, do not connect the other probes.


Is the pin21, 22 of IC801 +10V?
NO
Check the power supply circuit.
YES
TOC read?
NO
Is the pickup at the most inner position?
NO
Is the voltage at pin17 approx −3V to the voltage at pin18.
NO
Is there +5V at pin21 of IC 401?
NO
YES
YES
YES
YES
Check the REST Switch, IC201 and connections.
Check the feed motor and wiring.
Check IC801 and associated components.
Check IC201, IC401 and wiring.
It must be possible to play the inner disc continuously during more than 5minutes (without skipping).
NO
During playing the inner side of the disc, the feed drive voltage of approx +400mV must appear per4 to 5seconds by observing between pin18 and pin17 of IC801 (pin18 must be the basis).
NO
Check IC401 and associated components.
YES
YES
Check the feed motor and wiring.
The SEARCH key must make it possible that the manual search continues during more than 15seconds.
NO
In that same condition, confirm that the signal from pin22 of IC501 shows the following waveform.
5V
0V
0.5ms/div
NO
Check IC501 and associated components.
YES
YES
Check IC201, IC401 and wiring.
Can each track be searched correctly?
YES
OK
NO
Observe pin18 and pin17 of IC801 during track number search between the inner and the outer side of the disc. Approx +3V must appear if the search is toward the outer side. And oppositely, if the search is toward the inner side, approx −3V must appear (pin18 must be the basis).
NO
In that same condition, observe pin18 of IC601. Approx −5V must appear if the search is toward the outer side. And if the search is toward the inner side, approx +5V must appear.
NO
Check IC201, IC401 and wiring.
YES
YES
Check IC801 and associated components.
The following signal must appear during track number search between the inner and the outer side of the disc by observing pin24 (W303) of IC501.
5V
0V
0.1ms/div
NO
Check IC501 and associated components.
YES
Check IC201, IC401 and wiring.

## Spindle section

Note) When checking the voltages between pin11 and pin12 of IC801 with an oscilloscope, do not connect the other probes.


Is the pin21, 22 of IC801 +10V?
NO
Check the power supply circuit.
YES
Does the spindle motor stop in the STOP status?
NO
Is pin29 of IC401 2.5V(VREF) fixedly?
NO
Check IC401 and associated components.
YES
Defective IC801
YES
Does the disc accelerate to rotate after closing the tray?
NO
Is the voltage approx +5V between pin11 and pin12 of IC801 for approx 400ms? (pin12 must be the basis)
NO
Can the following waveform be observed at pin24 of IC401?
2.5V (V REF)
0
Approx 400ms
NO
Check IC401 or IC201.
YES
Check the spindle motor and wiring.
YES
Check IC801 and associated components.
YES
Does the disc rotate smoothly in the PLAY status?
NO
The following waveforms must appear by observing between pin11 and pin12 of IC801 during playing the inner side of the disc. (pin12 must be the basis.)
0
AVE. 600mV
500mV/div
50ms/div
NO
Does the signal from pin25 of IC401 show the following waveform during playing mode?
2.5V (V REF)
0
Approx 135µs
50µs/div
NO
Check IC401 and IC201.
YES
Check the spindle motor and wiring.
YES
Check IC801 and associated components.
Check the RF signal and pickup.
YES
Does the spindle motor stop soon after the Stop Button is pressed?
NO
Is there approx −4V between pin11 and pin12 of IC801 for 300~600ms when stopped? (pin12 must be the basis.)
NO
Is there the following signal at pin24 of IC401 when stopped?
300~600ms
2.5V (V REF)
5V
0
NO
Check IC401 or IC201.
YES
OK
YES
Check the spindle motor and wiring.
YES
Check IC801 and associated components.


ENN-427-1
J301
J701
ENN-427-5
J371
FW106
P301
Q301
Q302
D131
D132
+10V
IC304
IC351
IC351
DCS
MUTE
Q131
Q132
ENN-472-2
D+5V
FL1
FL2
Q153
Q151
Q152
-V disp
Q114
D111
~
D114
D121
~
D124
FW107
P107
Q107
Q105
Q101
Q103
Q115
D115
D116
M+5V
+5V
+10V
-10V
P105
PEM
D/A CONVERTER
IC301
MN35502
OUT1A
OUT1B
OUT1C
OUT1D
OUT2D
OUT2C
OUT2B
OUT2A
RST
LRCK
BCK
DIN
M4
CKO
DIGITAL SERVO
&
DIGITAL SIGNAL
PROCESSOR
IC401
MN66270
LRCK
BCLK
SRDATA
DEMPH
X1
ECM
ECS
KICK
TRD
FOD
TVD
TRV
MLD
MCLK
MDATA
RST
SOCK
TLOCK
FLOCK
SENSE
STATUS
SUBQ
TE
FE
OFT
TRCRS
RFDET
BDO
VDET
RFENV
Vref
FBA
TBAL
ARF
FW105
P.OFF
J202
J201
COMPULINK
Q201,Q202
ENN-427-3
DCS
SYSTEM
CONTROLLER
IC201
MN171602JHH
RESET
IC202
MN1281
REMOCON
RECEIVER
IC203
GP1U501X
KEY MATRIX
SW201~
SW218
FL DISPLAY
FL201
ELU0001-114
FW202
FW202
KEY MATRIX
SW219~
SW222
ENN-427-4
OPEN
CLOSE
IC851
Loading Servo
Q851
Q852
RF AMP & SERVO AMP
IC501
AN8803SB
ARF
RFENV
TEOUT
FEOUT
OFTR
CROSS
NRFDET
BDO
VDET
Vref
PDAC
PDBD
PDE
PDF
TBAL
FBA
MD
APC
Q501
LD
A
B
C
D
F
E
BTL DRIVER
IC801
BA6993FP
BIAS IN
CH1OUTA
CH1OUTB
CH2OUTA
CH2OUTB
CH3OUTA
CH3OUTB
CH4OUTA
CH4OUTB
CH1INB
CH2INB
CH3INB
CH4INB
OPIN+
OPIN-
OPOUT
Rest
Switch
OPEN
/CLOSE
Switch
P103
P102
P104
Laser
Pickup
OPTIMA-6
(+)(-)(+)(-)
T F F T
Feed
Motor
PU
Rest
Switch
Spindle
Motor
Loading
Motor
Open /Close
Switch

# PARTS LIST

**Note : All printed circuit borad assemblies are not available as service parts.**

## Contents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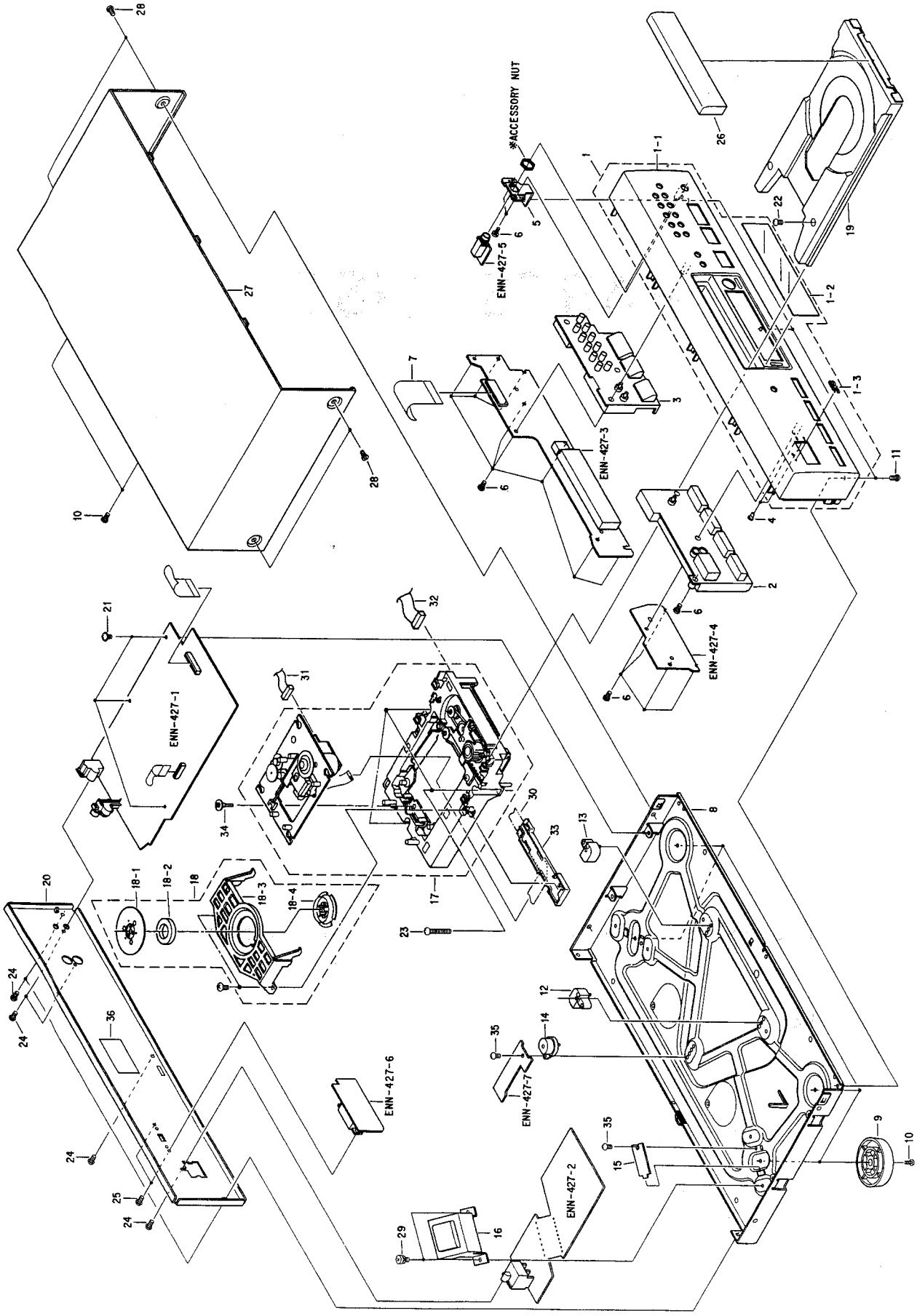
CD Mechanism Ass'y and Parts List ..... 2-5
Printed Circuit Board Ass'y and Parts List ..... 2-7
■ ENN-427 □ Main PC Board Ass'y ..... 2-7
Accessories List ..... 2-12
Packing Materials and Part Numbers ..... 2-13

# General Exploded View and Parts List

Symbol No. M 1 M M



■ PARTS LIST

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | EFP-XLV184BKE(S | FRONT PANEL ASSY | 1 | | BS,EF,EN,G |
| | | EFP-XLV184BKU(S | FRONT PANEL ASSY | 1 | | U,UT |
| | 1-1 | E102965-221SF | FRONT PANEL | 1 | | BS |
| | | E102965-221SF | FRONT PANEL | 1 | | EF |
| | | E102965-221SF | FRONT PANEL | 1 | | EN |
| | | E102965-221SF | FRONT PANEL | 1 | | G |
| | | E102965-003SS | FRONT PANEL | 1 | | U |
| | | E102965-003SS | FRONT PANEL | 1 | | UT |
| | 1-2 | E309266-003SS | W.SCREEN | 1 | | |
| | 1-3 | VJD5429-001SS | JVC MARK | 1 | | |
| | 2 | E208388-001SS | PUSH BUTTON | 1 | | |
| | 3 | E208390-001SS | PUSH BUTTON | 1 | | |
| | 4 | FSJD4001-002 | INDICATOR | 2 | | |
| | 5 | E309270-001SS | H.P.BRACKET | 1 | | |
| | 6 | SDSF2608Z | SCREW | 15 | | |
| | 7 | VWF1219-12TTB | FLAT CORD | 1 | | |
| | 8 | E102964-001SS | C.D CHASSIS BASE | 1 | | |
| | 9 | E406282-005SF | FOOT ASSY | 4 | | BS |
| | | E406282-005SF | FOOT ASSY | 4 | | EF |
| | | E406282-005SF | FOOT ASSY | 4 | | EN |
| | | E406282-005SF | FOOT ASSY | 4 | | G |
| | | FSYH4001-00E | FOOT ASSY | 4 | | U |
| | | FSYH4001-00E | FOOT ASSY | 4 | | UT |
| | 10 | SBST3008M | TAPPING SCREW | 8 | | |
| | 11 | SBSG3008M | TAPPING SCREW | 3 | | |
| | 12 | E309322-001SS | STAND(L) | 1 | | |
| | 13 | E309321-001SS | STAND(R) | 1 | | |
| | 14 | E309323-001SS | STAND(REAR) | 1 | | |
| | 15 | E309316-001SS | TRANS PLATE | 1 | | |
| ⚠ | 16 | ETP1000-74EAJBS | POWER TRANSFORMER | 1 | | BS |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | EF |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | EN |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | G |
| ⚠ | | ETP1000-70LAJ | POWER TRASNFORMER | 1 | | U |
| ⚠ | | ETP1000-70LAJ | POWER TRASNFORMER | 1 | | UT |
| | 17 | ---------- | CD MECANISM ASSY | 1 | SEE PAGE 2-5 | |
| | 18 | E306837-005 | CLAMPER BASE ASSY | 1 | | |
| | 18-1 | E306836-223SS | YOKE PLATE | | | |
| | 18-2 | E74897-002 | C.D MAGNET | 1 | | |
| | 18-3 | E26756-222SS | CLAMPER BASE | 1 | | |
| | 18-4 | E306835-221SS | CD CLAMPER | 1 | | |
| | 19 | E102984-001SS | CD TRAY | 1 | | |
| | 20 | E208392-001SSF | REAR PANEL | 1 | | BS |
| | | E208392-001SSF | REAR PANEL | 1 | | EF |
| | | E208392-001SSF | REAR PANEL | 1 | | EN |
| | | E208392-001SSF | REAR PANEL | 1 | | G |
| | | E208392-003SS | REAR PANEL | 1 | | U |
| | | E208392-003SS | REAR PANEL | 1 | | UT |
| | 21 | GBSG3008CC | TAPPING SCREW | 3 | | |
| | 22 | SBSF3008M | TAPPING SCREW | 1 | | |
| | 23 | SBST3020Z | TAPPING SCREW | 4 | | |
| | 24 | E73273-006 | SPECIAL SCREW | 6 | | |
| | 25 | SBSF2608M | TAPPING SCREW | 2 | | U |

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 25 | SBSF2608M | TAPPING SCREW | 2 | | UT |
| | 26 | E309268-001SS | FITTING | 1 | | |
| | 27 | E206906-225 | METAL COVER | 1 | | BS |
| | | E206906-225 | METAL COVER | 1 | | EF |
| | | E206906-225 | METAL COVER | 1 | | EN |
| | | E206906-225 | METAL COVER | 1 | | G |
| | | E206906-003 | METAL COVER | 1 | | U |
| | | E206906-003 | METAL COVER | 1 | | UT |
| | 28 | E406308-001 | SPECIAL SCREW | 4 | | |
| | 29 | E65389-002 | SPECIAL SCREW | 2 | | |
| | 30 | EWPZ02-001 | FFC CABLE | 1 | | |
| | 31 | EWS266-B410 | SOCKET WIRE ASSY | 1 | | |
| | 32 | EWS265-B408 | SOCKET WIRE ASSY | 1 | | |
| | 33 | E308181-221SS | FFC HOLDER | 1 | | |
| | 34 | E406293-001 | SPECIAL SCREW | 1 | | |
| | 35 | SBSG3008CC | TAPPING SCREW | 2 | | |
| | 36 | E406507-001 | CAUTION LABEL | 1 | | |
| | - | E70891-001 | CLASS 1 LABEL | 1 | | |
| | - | E61029-005 | NUMBER LABEL | 1 | | |
| | - | QZL1007-001 | BEAB LABEL | 1 | | BS |
| | - | QZL1031-101 | LABEL | 1 | | EF |
| | - | E70028-001 | APPROVAL LABEL | 1 | | EN |
| | - | E70419-003F | F MARK LABEL | 1 | | G |
| | - | E408450-001 | CE LABEL | 1 | | Except U,UT |
| | - | E75139-004 | NAME LABEL | 1 | | UT |
| | - | E309383-003 | RATING LABEL | 1 | | UT |

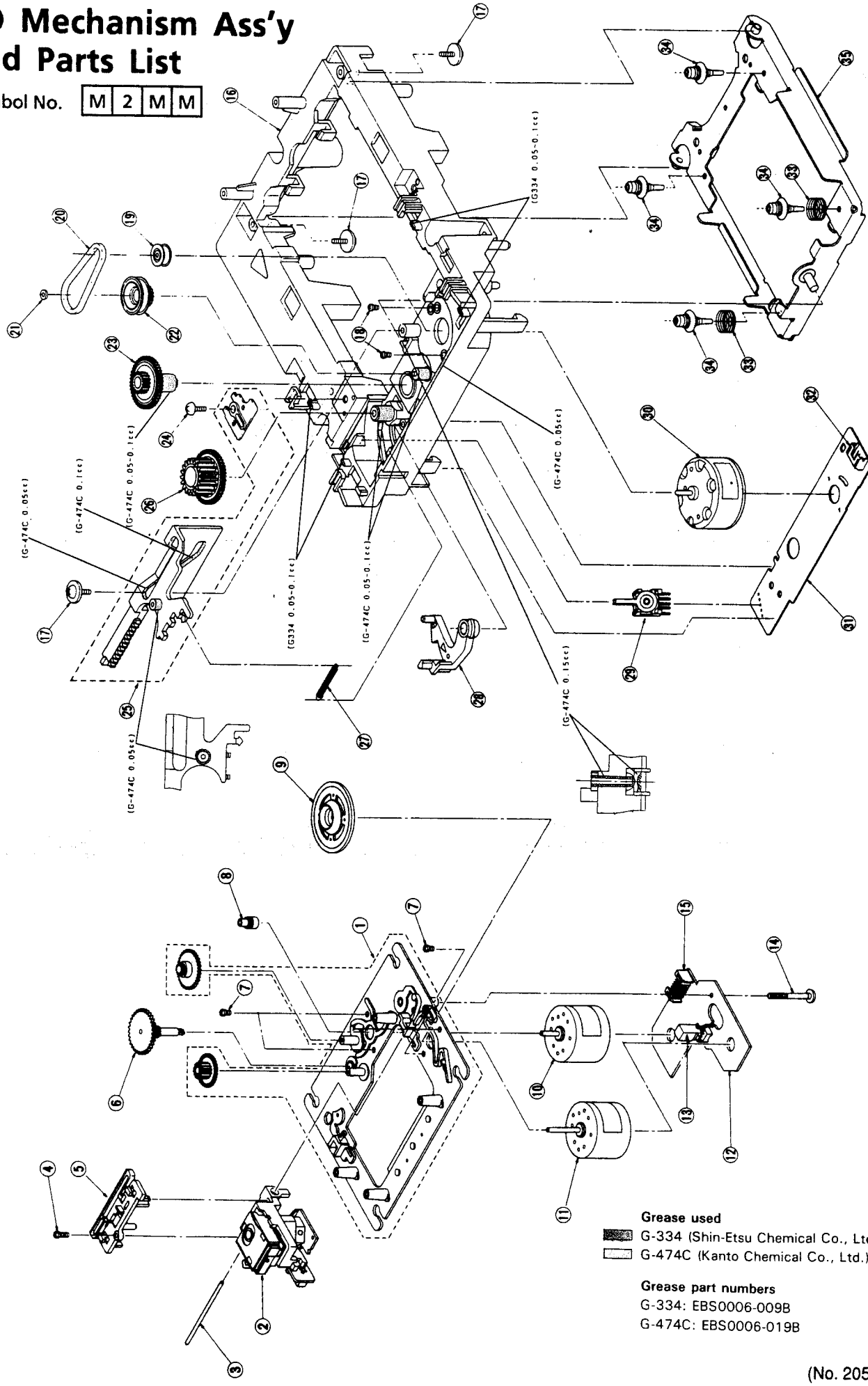
**The Marks for Designated Areas**

BS .... the U.K.
EF .... Continental Europe
EN .... Scandinavia
G ..... Germany
U ..... Universal Type
UT .... Taiwan

No mark indicates all area.

# CD Mechanism Ass'y and Parts List

Symbol No. M 2 M M




**Grease used**

G-334 (Shin-Etsu Chemical Co., Ltd.)

G-474C (Kanto Chemical Co., Ltd.)

**Grease part numbers**

G-334: EBS0006-009B

G-474C: EBS0006-019B

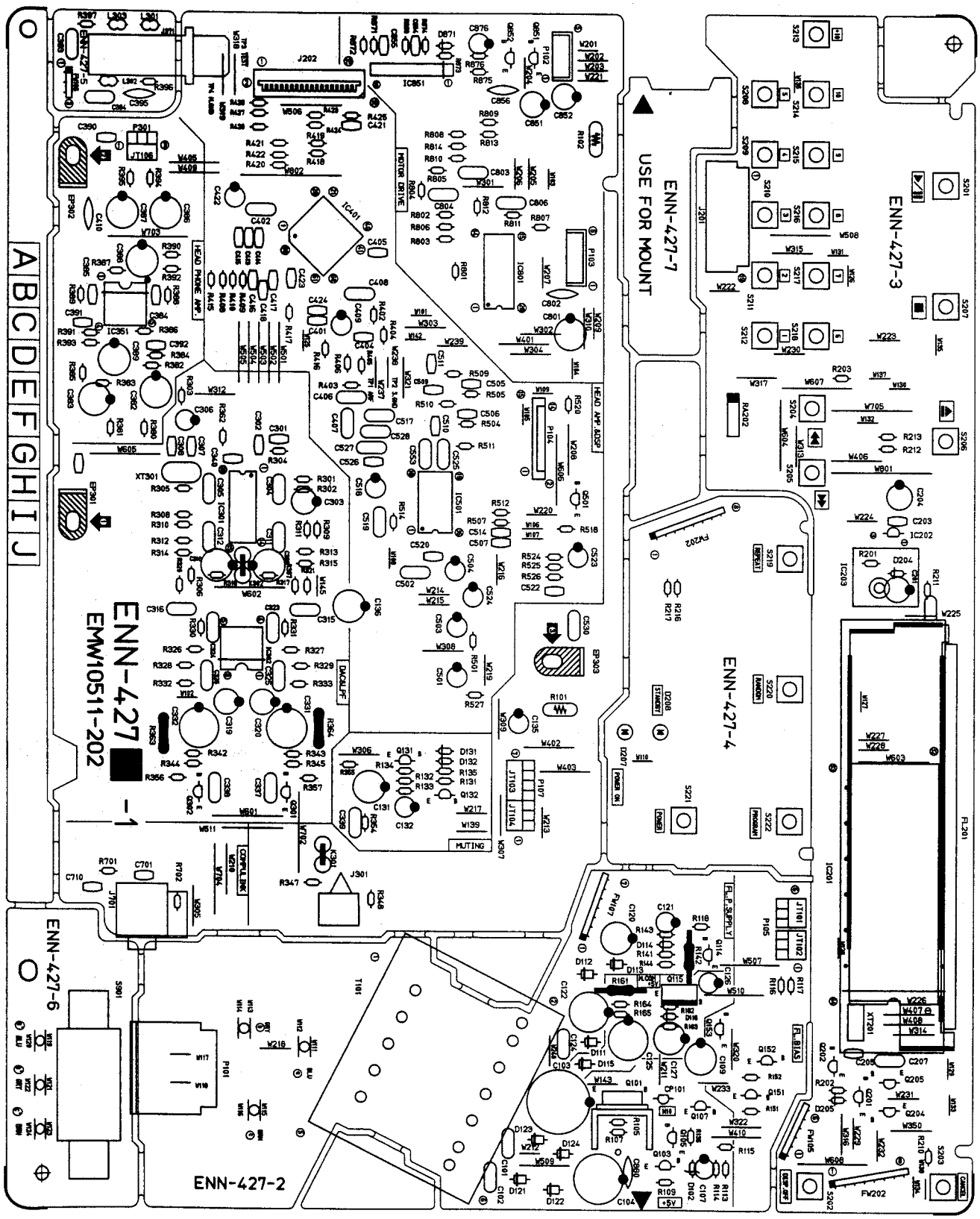
■ PARTS LIST ( CD Mechanism Ass'y )

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | E102501-221SS | MECHA BASE | 1 | | |
| | 2 | OPTIMA-6S | OPTICAL PICK-UP | 1 | | |
| | 3 | E406777-001 | GUIDE SHAFT | 1 | | |
| | 4 | SDSF2006Z | SCREW | 1 | | |
| | 5 | E307746-332SF | CD RACK | 1 | | |
| | 6 | E307745-221SS | CAM GEAR | 1 | | |
| | 7 | SDSP2003N | SCREW | 4 | | |
| | 8 | E406750-221SS | PINION GEAR | 1 | | |
| | 9 | E75807-302 | TURNTABLE | 1 | | |
| | 10 | MDN-4RA3ETA-1 | FEED MOTOR | 1 | | |
| | 11 | E406783-001 | DC MOTOR | 1 | | |
| | 12 | EMW10190-001(S) | CIRCUIT BOARD | 1 | | |
| | 13 | ESB1100-005 | LEAF SWITCH | 1 | | |
| | 14 | E75832-001 | SPECIAL SCREW | 1 | | |
| | 15 | EMV5109-006B | CONNECT TERMINAL | 1 | 6PIN | |
| | 16 | E102357-221 | LOADING BASE | 1 | | |
| | 17 | E65923-003 | TAPPING SCREW | 3 | | |
| | 18 | SPSK2640Z | SCREW | 1 | | |
| | 19 | E75984-001 | MOTOR PULLEY | 1 | | |
| | 20 | E75950-002 | REEL BELT | 1 | | |
| | 21 | E72024-001 | SPEED NUT | 1 | | |
| | 22 | E75985-001 | DRIVE GEAR | 1 | | |
| | 23 | E75986-002 | REEL GEAR | 1 | | |
| | 24 | SBSF3008Z | TAPPING SCREW | 1 | | |
| | 25 | E307252-221 | CAM ASSY | 1 | | |
| | 26 | E75987-001 | REEL GEAR | 1 | | |
| | 27 | E75989-001 | SPRING | 1 | | |
| | 28 | E307162-221 | ACTION LEVER | 1 | | |
| | 29 | ESS1200-002 | LEVER SWITCH | 1 | | |
| | 30 | MMN-6F1LB8K | DC MOTOR | 1 | | |
| | 31 | EMW10095-003A | CIRCUIT BOARD | 1 | | |
| | 32 | EMV5109-005B | CONNECT TERMINAL | 1 | 5PIN | |
| | 33 | E406871-001 | SPRING | 2 | | |
| | 34 | E406294-002 | INSULATOR | 4 | | |
| | 35 | E307179-222 | LOADING BASE | 1 | | |

# Printed Circuit Board Ass'y and Parts List

## ■ ENN-427 □ Main PC Board Assy

Note: ENN-427 □ varies according to the areas employed.See note (1) when placing an order.



Note (1)

| PC Board Ass'y | Version | Designated Areas |
|---|---|---|
| ENN-427 C | BS | the U.K. |
| ENN-427 A | EF | CoScandinavia |
| | EN | ntinental Europe |
| ENN-427 G | U | Universal Type |
| | UT | Taiwan |
| ENN-427 B | G | Germany |

TRANSISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | Q101 | 2SB1565(E,F) | SI.TRANSIST ROHM | |
| | Q103 | 2SD1302 | SI.TRANSIST MATSUSHITA | |
| | Q105 | 2SA933(R,S) | SI.TRANSIST ROHM | |
| | Q107 | DTA114YS | DIGITAL TRA ROHM | |
| | Q114 | 2SA934(Q,R) | SI.TRANSIST ROHM | |
| | Q115 | 2SD313V(D,E) | SILICON | |
| | Q131 | 2SA933(R,S) | SI.TRANSIST ROHM | |
| | Q132 | DTC114YS | DIGITAL TRA ROHM | |
| | Q151 | 2SD2144S(VW) | SI.TRANSIST ROHM | |
| | Q152 | 2SD2144S(VW) | SI.TRANSIST ROHM | |
| | Q153 | DTA114YS | DIGITAL TRA ROHM | |
| | Q201 | DTA114YS | DIGITAL TRA ROHM | |
| | Q202 | DTC114YS | DIGITAL TRA ROHM | |
| | Q204 | DTC114YS | DIGITAL TRA ROHM | |
| | Q205 | DTC114YS | DIGITAL TRA ROHM | |
| | Q301 | 2SC3068 | SI.TRANSIST SANYO | |
| | Q302 | 2SC3068 | SI.TRANSIST SANYO | |
| | Q501 | 2SA950(O,Y) | SI.TRANSIST TOSHIBA | |
| | Q851 | 2SC2060(Q,R) | SI.TRANSIST ROHM | |
| | Q852 | 2SA934(Q,R) | SI.TRANSIST ROHM | |

I. C. S.

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | IC201 | MN171202J5W | I.C. | |
| | IC202 | MN1281(P,Q) | I.C(DIGI-MO MATSUSHITA | |
| | IC301 | MN35502 | I.C(DIGI-MO MATSUSHITA | |
| | IC302 | VC4580D | I.C(MONO-AN | |
| | IC351 | VC4580D | I.C(MONO-AN | |
| | IC401 | MN662720RB | I.C(DIGI-MO MATSUSHITA | |
| | IC501 | AN8806SB | I.C(M) MATSUSHITA | |
| | IC801 | BA6398FPX | I.C(MONO-AN ROHM | |
| | IC851 | NJM4558L | I.C(MONO-AN DAINICHI | |

DIODES

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | D102 | MTZ5.6JA | ZENER DIODE ROHM | |
| | D111 | 1SR139-200 | SI.DIODE ROHM | |
| | D112 | 1SR139-200 | SI.DIODE ROHM | |
| | D113 | 1SR139-200 | SI.DIODE ROHM | |
| | D114 | MTZ30JC | ZENER DIODE ROHM | |
| | D115 | 1SR139-200 | SI.DIODE ROHM | |
| | D116 | MTZ5.6JA | ZENER DIODE ROHM | |
| | D121 | 11E2 | SI.DIODE NIHONINTER | |
| | D122 | 11E2 | SI.DIODE NIHONINTER | |
| | D123 | 11E2 | SI.DIODE NIHONINTER | |
| | D124 | 11E2 | SI.DIODE NIHONINTER | |
| | D131 | 1SS133 | SI.DIODE ROHM | |
| | D132 | 1SS133 | SI.DIODE ROHM | |
| | D204 | 1SS133 | SI.DIODE ROHM | |
| | D205 | 1SS133 | SI.DIODE ROHM | |
| | D207 | SLA-380MTA | L.E.D. ROHM | |
| | D208 | SLA-380LT | L.E.D. ROHM | |
| | D871 | 1SS133 | SI.DIODE ROHM | |

CAPACITORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | C101 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C102 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | BS |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | EF |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | EN |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | G |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | U |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | UT |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | BS |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | EF |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | EN |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | G |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | U |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | UT |
| | C107 | QETB1EM-476 | 47MF 25V AL E.CAPAC | |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | BS |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | EF |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | EN |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | G |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | U |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | UT |
| | C120 | QETB1HM-107 | 100MF 50V E.CAPACITO | |
| | C121 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C122 | QETB1EM-477E | 470MF 25V E.CAPACITO | |
| | C124 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C125 | QETB1EM-477E | 470MF 25V E.CAPACITO | |
| | C126 | QETB1AM-476 | 47MF 10V E.CAPACITO | |
| | C127 | QETB1AM-107 | 100MF 10V AL E.CAPAC | |
| | C131 | QETB1CM-227 | 220MF 16V AL E.CAPAC | |
| | C132 | QETB1CM-226 | 22MF 16V E.CAPACITO | |
| | C203 | QCHB1EZ-223 | 0.022MF 25V CER.CAPACI | |
| | C204 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | |
| | C205 | QCBB1HK-331Y | 330PF 50V CER.CAPACI | |
| | C207 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C301 | QCT30CH-5R6Y | 5.6PF 50V CER.CAPACI | |
| | C302 | QCT30CH-5R6Y | 5.6PF 50V CER.CAPACI | |
| | C303 | QETB1AM-477 | 470MF 10V E.CAPACITO | |
| | C304 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C305 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C306 | QETB1AM-227 | 220MF 10V E.CAPACITO | |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | BS |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EF |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EN |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | G |
| | C307 | QCT30CH-100Y | 10PF 50V CER.CAPACI | U |
| | C307 | QCT30CH-100Y | 10PF 50V CER.CAPACI | UT |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | BS |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EF |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EN |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | G |
| | C308 | QCT30CH-120Y | 12PF 50V CER.CAPACI | U |
| | C308 | QCT30CH-120Y | 12PF 50V CER.CAPACI | UT |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | BS |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | EF |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | EN |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | G |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | U |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | UT |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | BS |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | EF |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | EN |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | G |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | U |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | UT |
| | C311 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C312 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | BS |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EF |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EN |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | G |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | U |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | UT |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | BS |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EF |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EN |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | G |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | U |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | UT |
| | C317 | QFP81HJ-122 | 1200PF 50V POLYPROPY. | |
| | C318 | QFP81HJ-122 | 1200PF 50V POLYPROPY. | |
| | C319 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C320 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | BS |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EF |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EN |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | G |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | U |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | UT |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | BS |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EF |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EN |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | G |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | U |
| | C324 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | UT |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | BS |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | EF |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | EN |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | G |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | U |
| | C325 | QFP81HJ-181 | 180PF 50V POLYPROPY. | UT |

## CAPACITORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | | | AREA |
|---|---|---|---|---|---|---|
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | BS |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EF |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EN |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | G |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | U |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | UT |
| | C331 | EET2502-476N | 47MF | | AL E.CAPAC | |
| | C332 | EET2502-476N | 47MF | | AL E.CAPAC | |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | BS |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EF |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EN |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | G |
| | C337 | QFN81HJ-103 | 0.01MF | | | U,UT |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | BS |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EF |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EN |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | G |
| | C338 | QFN81HJ-103 | 0.01MF | | | U,UT |
| | C339 | QFN81HJ-104 | 0.1MF | 50V | METAL.MYLA | |
| | C340 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C382 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C383 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C384 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C385 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C386 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C387 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C388 | QETB1CM-226 | 22MF | 16V | E.CAPACITO | |
| | C389 | QETB1CM-476 | 47MF | 16V | AL E.CAPAC | |
| | C390 | QCBB1HK-471Y | 470PF | 50V | CER.CAPACI | |
| | C391 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C391 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | |
| | C392 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C393 | QFN81HJ-103 | 0.01MF | 50V | METAL.MYLA | |
| | C394 | QFN81HJ-103 | 0.01MF | 50V | METAL.MYLA | |
| | C401 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C402 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C404 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C405 | QCBB1HK-471Y | 470PF | 50V | CER.CAPACI | |
| | C406 | QFN81HJ-223 | 0.022MF | 50V | METAL.MYLA | |
| | C407 | QFV71HJ-334ZM | 0.33MF | 50V | THIN FILM | |
| | C408 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C409 | QETB1AM-107 | 100MF | 10V | AL E.CAPAC | |
| | C410 | QCF31HP-103Z | 0.01MF | 50V | CER.CAPACI | |
| | C413 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C414 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C415 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C416 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C417 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C418 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C421 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C422 | QETB0JM-227 | 220MF | 6.3V | E.CAPACITO | |
| | C423 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C424 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C501 | QETB1AM-107 | 100MF | 10V | AL E.CAPAC | |
| | C502 | QCZ0205-155 | 1.5MF | 25V | C.CAPACITO | |
| | C503 | QETB1AM-476 | 47MF | 10V | E.CAPACITO | |
| | C504 | QETC0JM-107ZM | 100MF | 6.3V | AL E.CAPAC | |
| | C505 | QCBB1HK-271Y | 270PF | 50V | CER.CAPACI | |
| | C506 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C507 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C509 | QCXB1CM-222Y | 2200PF | 16V | CER.CAPACI | |
| | C510 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C511 | QCGB1HK-821 | 820PF | 50V | CER.CAPACI | |
| | C514 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C517 | QFN31HJ-332Z | 3300PF | 50V | MYLAR CAPA | |
| | C518 | QETB1HM-105 | 1MF | 50V | AL E.CAPAC | |
| | C519 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C520 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C522 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C523 | QETB1HM-106 | 10MF | 50V | E.CAPACITO | |
| | C524 | QETB1AM-476 | 47MF | 10V | E.CAPACITO | |
| | C525 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C526 | QCBB1HK-101Y | 100PF | 50V | CER.CAPACI | |
| | C527 | QFV81HJ-273 | 0.027MF | 50V | THIN FILM | |
| | C528 | QFN81HJ-472 | 4700PF | 50V | MYLAR CAPA | |
| | C530 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C553 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C701 | QCBB1HK-101Y | 100PF | 50V | CER.CAPACI | |
| | C710 | QCVB1CM-103Y | 0.01MF | 16V | CER.CAPACI | |
| | C801 | QETB1CM-227 | 220MF | 16V | AL E.CAPAC | |
| | C802 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | |
| | C803 | QFN81HJ-273 | 0.027MF | 50V | METAL.MYLA | |
| | C804 | QFN81HJ-183 | 0.018MF | 50V | METAL.MYLA | |
| | C806 | QFV81HJ-273 | 0.027MF | 50V | THIN FILM | |
| | C851 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C852 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C854 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C855 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C856 | QCF31HP-103Z | 0.01MF | 50V | CER.CAPACI | |
| | C876 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | BS |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | EF |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | EN |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | G |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | U |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | UT |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | | | AREA |
|---|---|---|---|---|---|---|
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | BS |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | EF |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | EN |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | G |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | U |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | UT |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | EN |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | G |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | U |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | UT |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | EN |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | G |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | U |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | UT |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R312 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R313 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | EN |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | G |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | U |
| | R314 | QRD161J-273 | 27K | 1/6W | CARBON RES | UT |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | EN |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | G |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | U |
| | R315 | QRD161J-273 | 27K | 1/6W | CARBON RES | UT |
| | R318 | QRD167J-153 | 15K | 1/6W | CARBON RES | |
| ⚠ | R101 | PTH8L07BB2R2N1B | | | POSITIVE T | |
| ⚠ | R102 | PTH8L07BB2R2N1B | | | POSITIVE T | |
| | R105 | QRD161J-222 | 2.2K | 1/6W | CARBON RES | |
| | R107 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R109 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R113 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R114 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R115 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R116 | QRD161J-911 | 910 | 1/6W | CARBON RES | |
| | R117 | QRD161J-911 | 910 | 1/6W | CARBON RES | |
| | R118 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R131 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R132 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R133 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R134 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R135 | QRD161J-683 | 68K | 1/6W | CARBON RES | |
| | R136 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R141 | QRD161J-242 | 2.4K | 1/6W | CARBON RES | |
| ⚠ | R142 | QRZ0077-560 | 56 | 1/4W | FUSIBLE RE | |
| | R143 | QRD167J-121 | 120 | 1/6W | CARBON RES | |
| | R144 | QRD161J-242 | 2.4K | 1/6W | CARBON RES | |
| | R151 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R152 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| ⚠ | R161 | QRZ0077-100 | 10 | 1/4W | FUSIBLE RE | |
| | R162 | QRD161J-181 | 180 | 1/6W | CARBON RES | |
| | R163 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| ⚠ | R164 | QRV144F-1801 | 1.8K | 1/4W | CONST.META | |
| ⚠ | R165 | QRV144F-1801 | 1.8K | 1/4W | CONST.META | |
| | R201 | QRD161J-821 | 820 | 1/6W | CARBON RES | |
| | R202 | QRD161J-472 | 4.7K | 1/6W | CARBON RES | |
| | R203 | QRD161J-472 | 4.7K | 1/6W | CARBON RES | |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | BS |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | EF |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | EN |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | G |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | U |
| | R205 | QRD161J-473 | 47K | 1/6W | CARBON RES | UT |
| | R210 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R211 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R212 | QRD161J-473 | 47K | 1/6W | CARBON RES | |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R213 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R216 | QRD161J-181 | 180 1/6W CARBON RES | |
| | R217 | QRD161J-181 | 180 1/6W CARBON RES | |
| | R252 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R301 | QRD167J-680 | 68 1/6W CARBON RES | |
| | R302 | QRD167J-680 | 68 1/6W CARBON RES | |
| | R303 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R304 | QRD161J-181 | 180 1/6W CARBON RES | |
| | R305 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | BS |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | EF |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | EN |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | G |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | U |
| | R306 | QRD161J-181 | 180 1/6W CARBON RES | UT |
| | R319 | QRD167J-153 | 15K 1/6W CARBON RES | |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | BS |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | EF |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | EN |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | G |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | U |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | UT |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | BS |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | EF |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | EN |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | G |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | U |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | UT |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R342 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R343 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | BS |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | EF |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | EN |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | G |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | U |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | UT |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | BS |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | EF |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | EN |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | G |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | U |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | UT |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | BS |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | EF |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | EN |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | G |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | U |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | UT |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | BS |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | EF |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | EN |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | G |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | U |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | UT |
| | R354 | QRD161J-684 | 680K 1/6W CARBON RES | |
| | R355 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R356 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R357 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R362 | QRD161J-103 | 10K 1/6W CARBON RES | |
| ⚠ | R363 | QRZ0077-4R7 | 4.7 1/4W FUSE RESIS | |
| ⚠ | R364 | QRZ0077-4R7 | 4.7 1/4W FUSE RESIS | |
| | R380 | QRD161J-561 | 560 1/6W CARBON RES | |
| | R381 | QRD161J-561 | 560 1/6W CARBON RES | |
| | R382 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R383 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R384 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R385 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R386 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R387 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R388 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R389 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R390 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R391 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R392 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R393 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | BS |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | EF |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | EN |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | G |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | U |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | UT |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | BS |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | EF |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | EN |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | G |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | U |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | UT |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | BS |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | EF |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | EN |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | G |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | U |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | UT |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | BS |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | EF |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | EN |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | G |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | U |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | UT |
| | R402 | QRD161J-124 | 120K 1/6W CARBON RES | |
| | R403 | QRD167J-155 | 1.5M 1/6W CARBON RES | |
| | R404 | QRD161J-104 | 100K 1/6W CARBON RES | |
| | R405 | QRD161J-104 | 100K 1/6W CARBON RES | |
| | R406 | QRD161J-681 | 680 1/6W CARBON RES | |
| | R408 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R409 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R410 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R415 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R416 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R417 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R418 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R419 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R420 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R421 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R422 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R423 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R424 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R425 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R426 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R427 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R428 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R501 | QRD161J-471 | 470 1/6W CARBON RES | |
| | R504 | QRD161J-114 | 110K 1/6W CARBON RES | |
| | R505 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R507 | QRD167J-134 | 130K 1/6W CARBON RES | |
| | R509 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R510 | QRD167J-154 | 150K 1/6W CARBON RES | |
| | R511 | QRD161J-394 | 390K 1/6W CARBON RES | |
| | R512 | QRD161J-913 | 91K 1/6W CARBON RES | |
| | R514 | QRD161J-123 | 12K 1/6W CARBON RES | |
| | R518 | QRD167J-121 | 120 1/6W CARBON RES | |
| | R520 | QRD161J-910Y | 91 1/6W CARBON RES | |
| | R524 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R525 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R526 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R527 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R701 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R702 | QRD161J-221 | 220 1/6W CARBON RES | |
| | R801 | QRD161J-821 | 820 1/6W CARBON RES | |
| | R802 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R803 | QRD161J-112 | 1.1K 1/6W CARBON RES | |
| | R804 | QRD167J-113 | 11K 1/6W CARBON RES | |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R805 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R806 | QRD161J-124 | 120K 1/6W CARBON RES | |
| | R807 | QRD167J-332 | 3.3K 1/6W CARBON RES | |
| | R808 | QRD161J-752 | 7.5K 1/6W CARBON RES | |
| | R809 | QRD167J-223 | 22K 1/6W CARBON RES | |
| | R810 | QRD161J-472 | 4.7K 1/6W CARBON RES | |
| | R811 | QRD167J-153 | 15K 1/6W CARBON RES | |
| | R812 | QRD161J-752 | 7.5K 1/6W CARBON RES | |
| | R813 | QRD167J-751 | 750 1/6W CARBON RES | |
| | R814 | QRD161J-683 | 68K 1/6W CARBON RES | |
| | R871 | QRD161J-513 | 51K 1/6W CARBON RES | |
| | R872 | QRD161J-513 | 51K 1/6W CARBON RES | |
| | R873 | QRD161J-753 | 75K 1/6W CARBON RES | |
| | R874 | QRD161J-623 | 62K 1/6W CARBON RES | |
| | R875 | QRD161J-221 | 220 1/6W CARBON RES | |
| | R876 | QRD161J-684 | 680K 1/6W CARBON RES | |
| | R890 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | RA202 | QRB035J-472 | 4.7K 1/8W NETWORK RE | |

## OTHERS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | | GBSG3008CC | TAPPING SCR | |
| | | E3400-431 | FELT SPACER | |
| | | EWT011-124 | TERMINAL WI | |
| | | QWE886-14RR | WIRE | U |
| | | QWE888-14RR | PIN WIRE | U |
| | | QWE881-14RR | VINYL WIRE | U |
| | | QWE886-14RR | WIRE | UT |
| | | QWE888-14RR | PIN WIRE | UT |
| | | QWE881-14RR | VINYL WIRE | UT |
| | J201 | EMV7123-019R | CONNECTOR 19PIN | |
| | J202 | EMV7123-019 | P.W.BOARD C 19PIN | |
| | J301 | EMN00TV-217A | PIN JACK | BS |
| | J301 | EMN00TV-217A | PIN JACK | EF |
| | J301 | EMN00TV-217A | PIN JACK | EN |
| | J301 | EMN00TV-217A | PIN JACK | G |
| | J301 | EMN00TV-217A | PIN JACK | U |
| | J301 | EMN00TV-217A | PIN JACK | UT |
| | J371 | QMS6302-131 | HEADPHONE J | |
| | J701 | QMS3501-020 | PIN JACK | |
| | K301 | ENZ8101-007 | INDUCTOR | BS |
| | K301 | ENZ8101-007 | INDUCTOR | EF |
| | K301 | ENZ8101-007 | INDUCTOR | EN |
| | K301 | ENZ8101-007 | INDUCTOR | G |
| | K302 | ENZ8101-007 | INDUCTOR | BS |
| | K302 | ENZ8101-007 | INDUCTOR | EF |
| | K302 | ENZ8101-007 | INDUCTOR | EN |
| | K302 | ENZ8101-007 | INDUCTOR | G |
| | L301 | EQL4004-1R0 | INDUCTOR | |
| | L302 | EQL4004-1R0 | INDUCTOR | |
| | L303 | EQL4004-1R0 | INDUCTOR | |
| ⚠ | P101 | QMCB001-E02HBS | AC SOCKET | BS |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | EF |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | EN |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | G |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | U |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | UT |
| | P102 | EMV5109-005A | MALE CONNEC 5PIN | |
| | P103 | EMV5109-006A | CONNECT TER 6PIN | |
| | P104 | EMV7144-015 | F.P.C.PLUG 15PIN | |
| | S201 | QSQ1001-E01ZJ7 | PUSH SWITCH PLAY/PAUSE | |
| | S202 | QSQ1001-E01ZJ7 | PUSH SWITCH DISPLAY ON/OFF | |
| | S203 | QSQ1001-E01ZJ7 | PUSH SWITCH CANCEL | |
| | S204 | QSQ1001-E01ZJ7 | PUSH SWITCH ⏮/◀◀ | |
| | S205 | QSQ1001-E01ZJ7 | PUSH SWITCH ▶▶/⏭ | |
| | S206 | QSQ1001-E01ZJ7 | PUSH SWITCH OPEN/CLOSE | |
| | S207 | QSQ1001-E01ZJ7 | PUSH SWITCH STOP | |
| | S208 | QSQ1001-E01ZJ7 | PUSH SWITCH 5 | |
| | S209 | QSQ1001-E01ZJ7 | PUSH SWITCH 4 | |
| | S210 | QSQ1001-E01ZJ7 | PUSH SWITCH 3 | |
| | S211 | QSQ1001-E01ZJ7 | PUSH SWITCH 2 | |
| | S212 | QSQ1001-E01ZJ7 | PUSH SWITCH 1 | |
| | S213 | QSQ1001-E01ZJ7 | PUSH SWITCH +10 | |
| | S214 | QSQ1001-E01ZJ7 | PUSH SWITCH 10 | |
| | S215 | QSQ1001-E01ZJ7 | PUSH SWITCH 9 | |
| | S216 | QSQ1001-E01ZJ7 | PUSH SWITCH 8 | |
| | S217 | QSQ1001-E01ZJ7 | PUSH SWITCH 7 | |
| | S218 | QSQ1001-E01ZJ7 | PUSH SWITCH 6 | |
| | S219 | QSQ1001-E01ZJ7 | PUSH SWITCH REPEAT | |
| | S220 | QSQ1001-E01ZJ7 | PUSH SWITCH RANDOM | |
| | S221 | QSQ1001-E01ZJ7 | PUSH SWITCH PROGRAM | |
| | S222 | QSQ1001-E01ZJ7 | PUSH SWITCH POWER | |
| ⚠ | S901 | QSS1L22-E01 | SLIDE SWITC | U |
| ⚠ | S901 | QSS1L22-E01 | SLIDE SWITC | UT |
| ⚠ | CP101 | ICP-N10 | I.C.PROTECT | |
| | EP301 | EMZ4002-001Z | EARTH PLATE | |
| | EP302 | EMZ4002-001Z | EARTH PLATE | |
| | EP303 | EMZ4002-001Z | EARTH PLATE | |
| | EP351 | E75464-001 | EARTH PLATE | |
| | EP701 | E406604-001 | EARTH BRACK | BS |
| | EP701 | E406604-001 | EARTH BRACK | EF |

## OTHERS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | EP701 | E406604-001 | EARTH BRACK | EN |
| | EP701 | E406604-001 | EARTH BRACK | G |
| | EP701 | E406604-001 | EARTH BRACK | U |
| | EP701 | E406604-001 | EARTH BRACK | UT |
| | FH201 | E306951-222SS | FL.HOLDER | |
| | FL201 | ELU0001-114 | FLUORESCENT | |
| | FS201 | E306805-010 | SPACER | |
| | FW105 | EWR36D-20LS | FLAT WIRE A 6PIN | |
| | FW106 | EWR33B-08LST | FLAT WIRE A 3PIN | |
| | FW107 | EWR37B-30LST | FLAT WIRE A 7PIN | |
| | FW202 | EWR38D-25SS | FLAT WIRE A 8PIN | |
| | HS101 | E70306-001 | HEAT SINK | |
| | JT101 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT102 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT103 | EMV7122-004Z | CONNECT TER 4PIN | |
| | JT104 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT106 | EMV7122-103 | CONNECT TER 3PIN | |
| | XT201 | ECX0060-000EM | CERAMIC RES | |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | BS |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | EF |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | EN |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | G |
| | XT301 | ECX0169-344EA | CRYSTAL | U |
| | XT301 | ECX0169-344EA | CRYSTAL | UT |
| | | EMW10511-202 | P.C.BOARD | |

# Accessories List

Symbol No. M 3 M M

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | E30580-2237ABS | INSTRUCTION BOOK | 1 | | BS |
| | | E30580-2234A | INSTRUCTION BOOK | 1 | | EF |
| | | E30580-2235A | INSTRUCTION BOOK | 1 | | EN |
| | | E30580-2234A | INSTRUCTION BOOK | 1 | | G |
| | | E30580-2236A | INSTRUCTION BOOK | 1 | | U |
| | | E30580-2236A | INSTRUCTION BOOK | 1 | | UT |
| ⚠ | 2 | QMP5520-1835BS | POWER CORD | 1 | | BS |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | EF |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | EN |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | G |
| ⚠ | | QMP7530-183 | POWER CORD | 1 | | U |
| ⚠ | | QMP7530-183 | POWER CORD | 1 | | UT |
| | 3 | EWP302-011 | SIGNAL CORD | 1 | | |
| | 4 | EWP805-001 | SIGNAL CORD | 1 | | |
| | 5 | E300196-010B | ENVELOPE | 1 | | BS |
| | 6 | E43486-340A | SAFETY SHEET | 1 | | BS |
| | 7 | E300196-010B | ENVELOPE | 1 | | |
| | - | BT20060 | WARRANTY CARD | 1 | | BS |
| | - | BT-20066A | WARRANTY CARD | 1 | | BS |
| | - | BT-20134 | WARRANTY CARD | 1 | | G |
| | - | ENZ2203-001 | ADAPTOR PLUG | 1 | | U |
| | - | ENZ2203-001 | ADAPTOR PLUG | 1 | | UT |

**The Marks for Designated Areas**

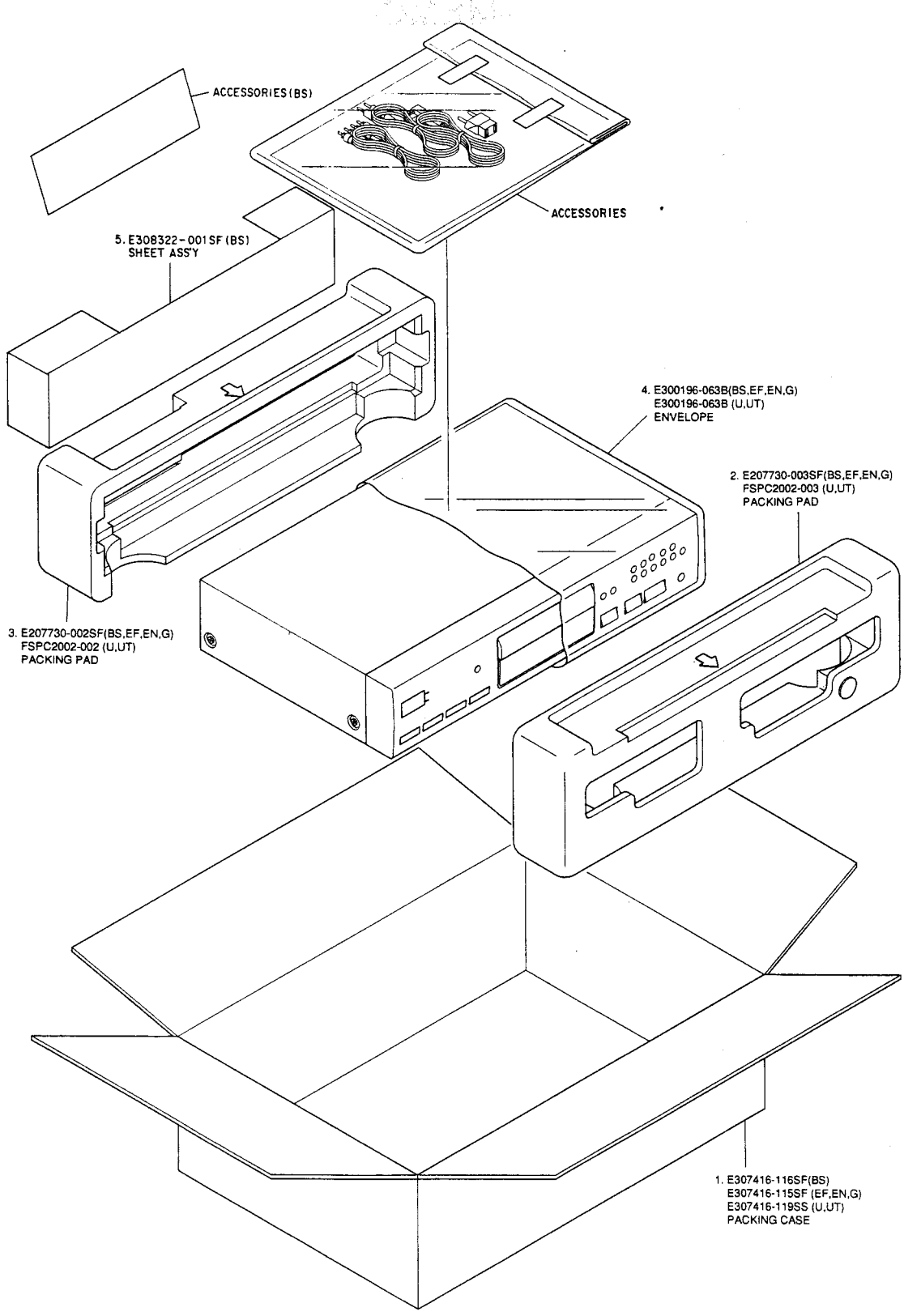
BS .... the U.K. EF .... Continental Europe EN .... Scandinavia

G ..... Germany U ..... Universal Type UT .... Taiwan

No mark indicates all area.

# Packing Materials and Part Numbers

Symbol No. M 4 M M




| The Marks for Designated Areas | | | | | |
|---|---|---|---|---|---|
| BS .... | the U.K. | EF .... | Continental Europe | EN .... | Scandinavia |
| G ..... | Germany | U ..... | Universal Type | UT .... | Taiwan |
| No mark indicates all area. | | | | | |

# PARTS LIST

**Note : All printed circuit borad assemblies are not available as service parts.**

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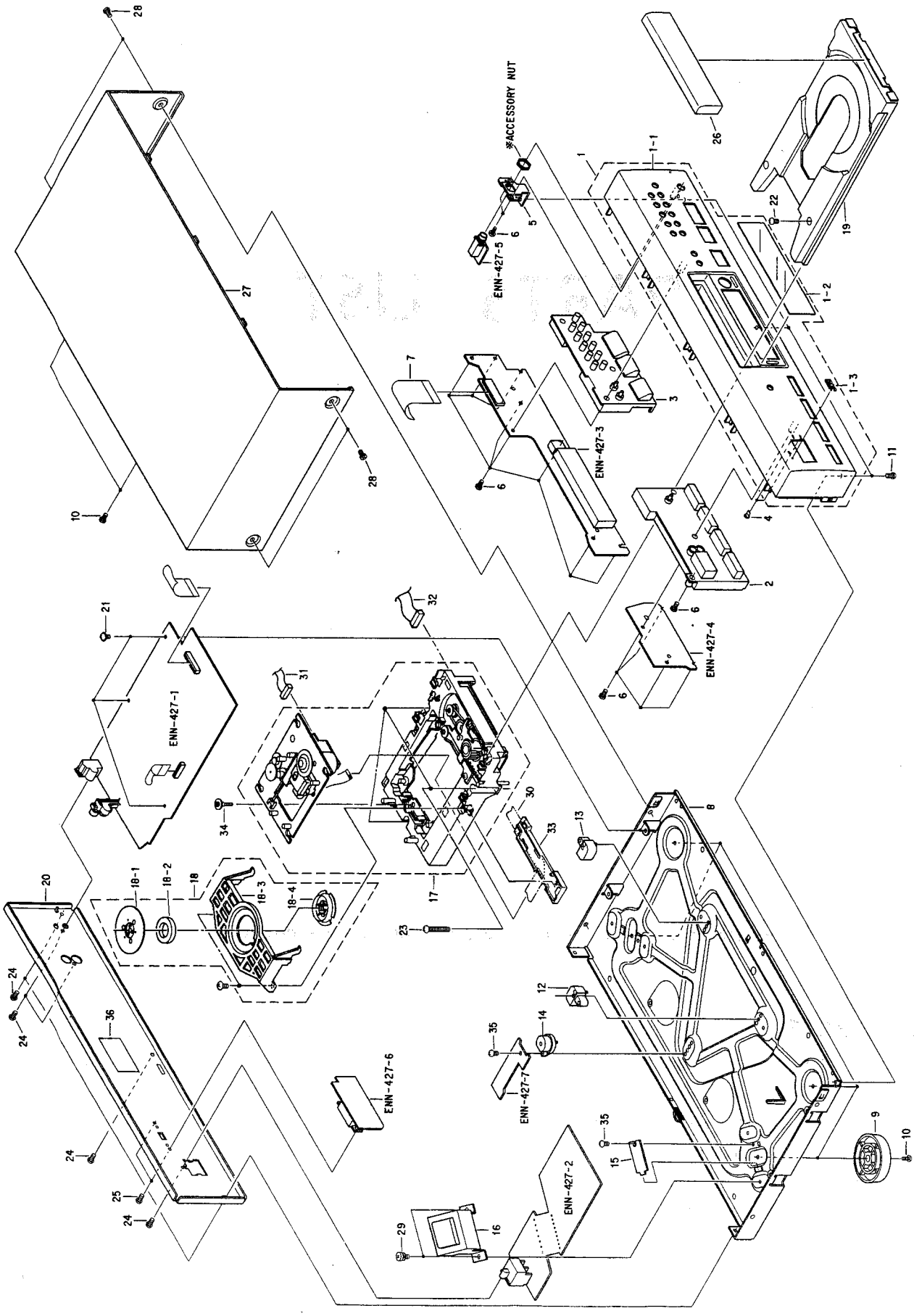
# General Exploded View and Parts List

Symbol No. M 1 M M



■ PARTS LIST

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | EFP-XLV284BKE(S | FRONT PANEL ASS | 1 | | BS,EF,EN,G |
| | | EFP-XLV284BKU(S | FRONT PANEL ASS | 1 | | U,UT |
| | 1-1 | E102965-222SF | FRONT PANEL | 1 | | BS |
| | | E102965-222SF | FRONT PANEL | 1 | | EF |
| | | E102965-222SF | FRONT PANEL | 1 | | EN |
| | | E102965-222SF | FRONT PANEL | 1 | | G |
| | | E102965-004SS | FRONT PANEL | 1 | | U |
| | | E102965-004SS | FRONT PANEL | 1 | | UT |
| | 1-2 | E309266-004SS | W.SCREEN | 1 | | |
| | 1-3 | VJD5429-001 | JVC MARK | 1 | | |
| | 2 | E208388-001SS | PUSH BUTTON | 1 | | |
| | 3 | E208390-001SS | PUSH BUTTON | 1 | | |
| | 4 | FSJD4001-002 | INDICATOR | 2 | | |
| | 5 | E309270-001SS | H.P.BRACKET | 1 | | |
| | 6 | SDSF2608Z | SCREW | 15 | | |
| | 7 | VWF1219-12TTB | FLAT CORD | 1 | | |
| | 8 | E102964-001SS | CD CHASSIS BASE | 1 | | |
| | 9 | E406282-005SF | FOOT ASSY | 4 | | BS |
| | | E406282-005SF | FOOT ASSY | 4 | | EF |
| | | E406282-005SF | FOOT ASSY | 4 | | EN |
| | | E406282-005SF | FOOT ASSY | 4 | | G |
| | | FSYH4001-00E | FOOT | 4 | | U |
| | | FSYH4001-00E | FOOT | 4 | | UT |
| | 10 | SBST3008M | TAPPING SCREW | 8 | | |
| | 11 | SBSG3008M | TAPPING SCREW | 3 | | |
| | 12 | E309322-001SS | STAND(L) | 1 | | |
| | 13 | E309321-001SS | STAND(R) | 1 | | |
| | 14 | E309323-001SS | STAND(REAR) | 1 | | |
| | 15 | E309316-001SS | TRANS PLATE | 1 | | |
| ⚠ | 16 | ETP1000-74EAJBS | POWER TRANSFORMER | 1 | | BS |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | EF |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | EN |
| ⚠ | | ETP1000-74EAJ | POWER TRANSFORMER | 1 | | G |
| ⚠ | | ETP1000-70LAJ | POWER TRASNFORMER | 1 | | U |
| ⚠ | | ETP1000-70LAJ | POWER TRASNFORMER | 1 | | UT |
| | 17 | ---------- | CD MECANISM ASSY | 1 | SEE PAGE 2-5 | |
| | 18 | E306837-005 | CLAMPER ASSY | 1 | | |
| | 18-1 | E306836-223SS | YOKE PLATE | 1 | | |
| | 18-2 | E74897-002 | MAGNET | 1 | | |
| | 18-3 | E26756-222SS | CLAMPER BASE | 1 | | |
| | 18-4 | E306835-221SS | CD CLAMPER | 1 | | |
| | 19 | E102984-001SS | CD TRAY | 1 | | |
| | 20 | E208392-002SSF | REAR PANEL | 1 | | BS |
| | | E208392-002SSF | REAR PANEL | 1 | | EF |
| | | E208392-002SSF | REAR PANEL | 1 | | EN |
| | | E208392-002SSF | REAR PANEL | 1 | | G |
| | | E208392-004SS | REAR PANEL | 1 | | U |
| | | E208392-004SS | REAR PANEL | 1 | | UT |
| | 21 | GBSG3008CC | TAPPING SCREW | 3 | | |
| | 22 | SBSF3008M | TAPPING SCREW | 1 | | |
| | 23 | SBST3020Z | TAPPING SCREW | 4 | | |
| | 24 | E73273-006 | SPECIAL SCREW | 6 | | |
| | 25 | SBSF2608M | TAPPING SCREW | 2 | | U |

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 25 | SBSF2608M | TAPPING SCREW | 2 | | UT |
| | 26 | E309268-001SS | FITTING | 1 | | |
| | 27 | E206906-225 | METAL COVER | 1 | | BS |
| | | E206906-225 | METAL COVER | 1 | | EF |
| | | E206906-225 | METAL COVER | 1 | | EN |
| | | E206906-225 | METAL COVER | 1 | | G |
| | | E206906-003 | METAL COVER | 1 | | U |
| | | E206906-003 | METAL COVER | 1 | | UT |
| | 28 | E406308-001 | SPECIAL SCREW | 4 | | |
| | 29 | E65389-002 | SPECIAL SCREW | 2 | | |
| | 30 | EWPZ02-001 | FFC CABLE | 1 | | |
| | 31 | EWS266-B410 | SOCKET WIRE ASSY | 1 | | |
| | 32 | EWS265-B408 | SOCKET WIRE ASSY | 1 | | |
| | 33 | E308181-221SS | FFC HOLDER | 1 | | |
| | 34 | E406293-001 | SPECIAL SCREW | 1 | | |
| | 35 | SBSG3008CC | TAPPING SCREW | 2 | | |
| | 36 | E406507-001 | CAUTION LABEL | 1 | | |
| | - | E70891-001 | CLASS 1 LABEL | 1 | | |
| | - | E61029-005 | NUMBER LABEL | 1 | | |
| | - | QZL1007-001 | BEAB LABEL | 1 | | BS |
| | - | QZL1031-101 | LABEL | 1 | | EF |
| | - | E70028-001 | APPROVAL LABEL | 1 | | EN |
| | - | E70419-003F | F MARK LABEL | 1 | | G |
| | - | E408450-001 | CE LABEL | 1 | | Except U,UT |
| | - | E75139-004 | NAME LABEL | 1 | | UT |
| | - | E309383-004 | RATING LABEL | 1 | | UT |

**The Marks for Designated Areas**

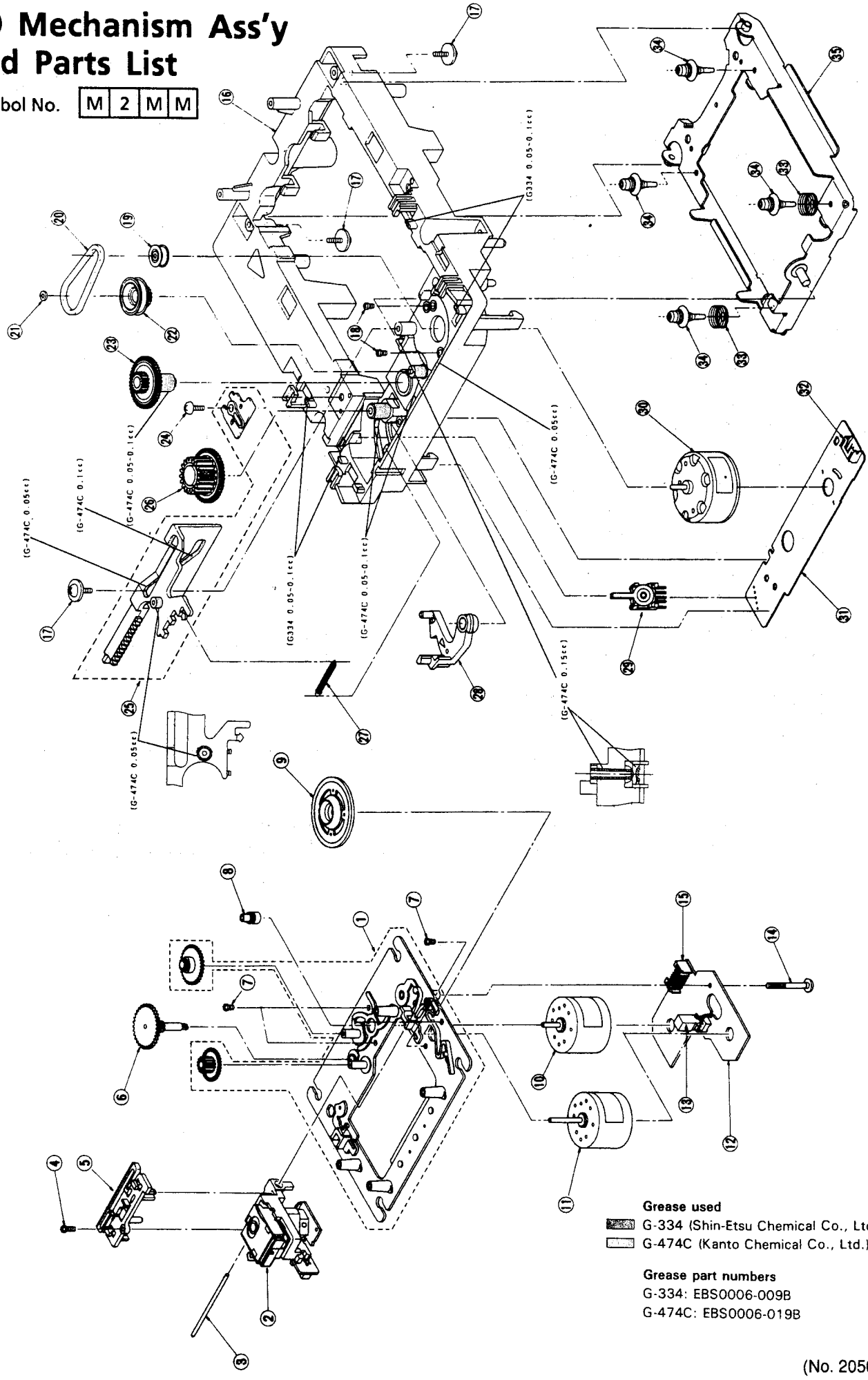
BS .... the U.K. EF .... Continental Europe EN .... Scandinavia

G ..... Germany U ..... Universal Type UT .... Taiwan

No mark indicates all area.

# CD Mechanism Ass'y and Parts List

Symbol No. M 2 M M




**Grease used**

G-334 (Shin-Etsu Chemical Co., Ltd.)

G-474C (Kanto Chemical Co., Ltd.)

**Grease part numbers**

G-334: EBS0006-009B

G-474C: EBS0006-019B

■ PARTS LIST ( CD Mechanism Ass'y )

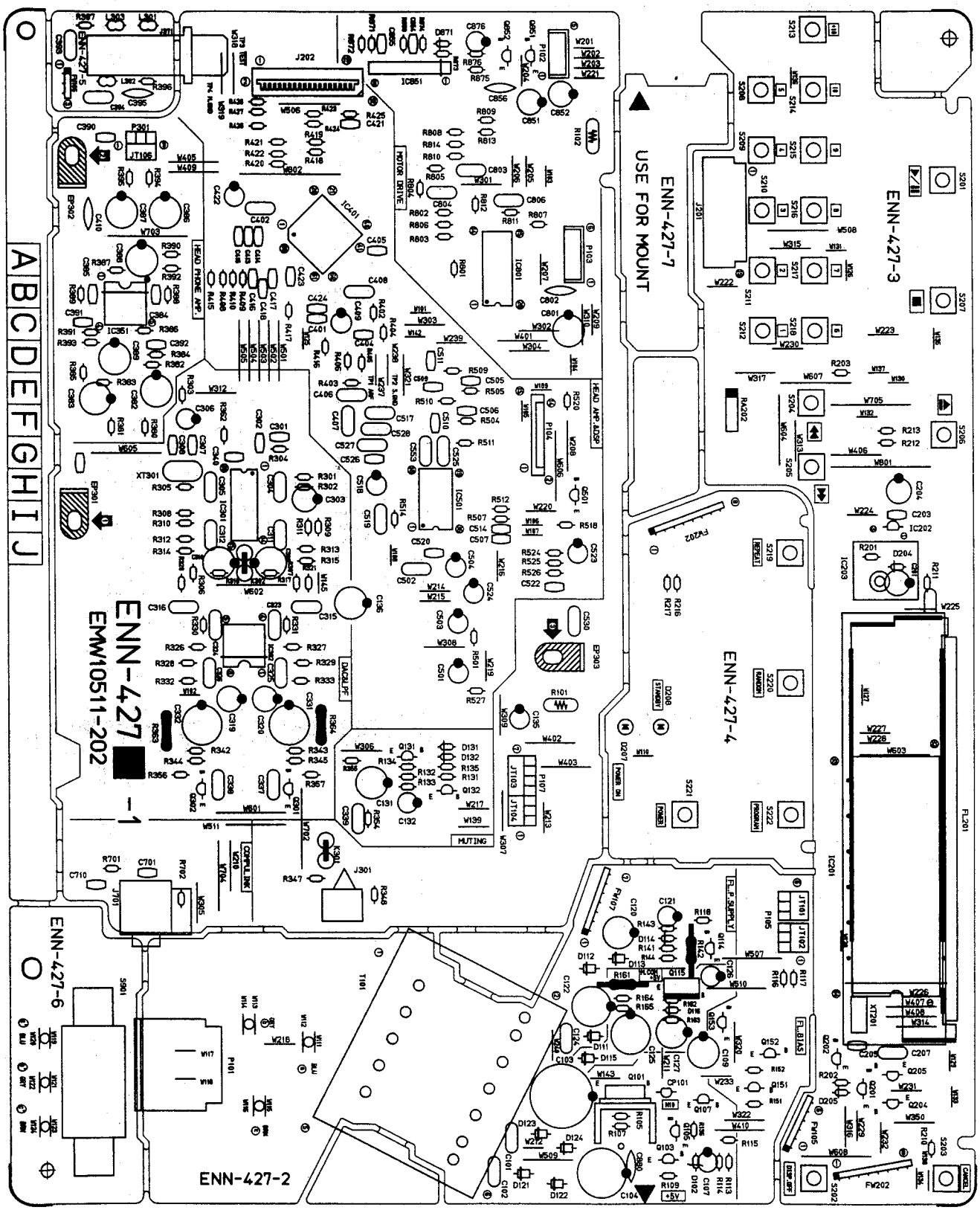
Symbol No. M 2 M M

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | E102501-221SS | MECHA BASE | 1 | | |
| | 2 | OPTIMA-6S | OPTICAL PICK-UP | 1 | | |
| | 3 | E406777-001 | GUIDE SHAFT | 1 | | |
| | 4 | SDSF2006Z | SCREW | 1 | | |
| | 5 | E307746-332SF | CD RACK | 1 | | |
| | 6 | E307745-221SS | CAM GEAR | 1 | | |
| | 7 | SDSP2003N | SCREW | 4 | | |
| | 8 | E406750-221SS | PINION GEAR | 1 | | |
| | 9 | E75807-302 | TURNTABLE | 1 | | |
| | 10 | MDN-4RA3ETA-1 | FEED MOTOR | 1 | | |
| | 11 | E406783-001 | DC MOTOR | 1 | | |
| | 12 | EMW10190-001(S) | CIRCUIT BOARD | 1 | | |
| | 13 | ESB1100-005 | LEAF SWITCH | 1 | | |
| | 14 | E75832-001 | SPECIAL SCREW | 1 | | |
| | 15 | EMV5109-006B | CONNECT TERMINAL | 1 | 6 PIN | |
| | 16 | E102357-221 | LOADING BASE | 1 | | |
| | 17 | E65923-003 | TAPPING SCREW | 3 | | |
| | 18 | SPSK2640Z | SCREW | 1 | | |
| | 19 | E75984-001 | MOTOR PULLEY | 1 | | |
| | 20 | E75950-002 | REEL BELT | 1 | | |
| | 21 | E72024-001 | SPEED NUT | 1 | | |
| | 22 | E75985-001 | DRIVE GEAR | 1 | | |
| | 23 | E75986-002 | REEL GEAR | 1 | | |
| | 24 | SBSF3008Z | TAPPING SCREW | 1 | | |
| | 25 | E307252-221 | CAM ASSY | 1 | | |
| | 26 | E75987-001 | REEL GEAR | 1 | | |
| | 27 | E75989-001 | SPRING | 1 | | |
| | 28 | E307162-221 | ACTION LEVER | 1 | | |
| | 29 | ESS1200-002 | LEVER SWITCH | 1 | | |
| | 30 | MMN-6F1LB8K | DC MOTOR | 1 | | |
| | 31 | EMW10095-003A | CIRCUIT BOARD | 1 | | |
| | 32 | EMV5109-005B | CONNECT TERMINAL | 1 | 5 PIN | |
| | 33 | E406871-001 | SPRING | 2 | | |
| | 34 | E406294-002 | INSULATOR | 4 | | |
| | 35 | E307179-222 | LOADING BASE | 1 | | |

# Printed Circuit Board Ass'y and Parts List

## ■ ENN-427 □ Main PC Board Assy

Note: ENN-427 □ varies according to the areas employed.See note (1) when placing an order.



Note (1)

| PC Board Ass'y | Version | Designated Areas |
|---|---|---|
| ENN-427 [F] | BS | the U.K. |
| ENN-427 [D] | EF | CoScandinavia |
| | EN | ntinental Europe |
| ENN-427 [H] | U | Universal Type |
| | UT | Taiwan |
| ENN-427 [E] | G | Germany |

TRANSISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | Q101 | 2SB1565(E,F) | SI.TRANSIST ROHM | |
| | Q103 | 2SD1302 | SI.TRANSIST MATSUSHITA | |
| | Q105 | 2SA933(R,S) | SI.TRANSIST ROHM | |
| | Q107 | DTA114YS | DIGITAL TRA ROHM | |
| | Q114 | 2SA934(Q,R) | SI.TRANSIST ROHM | |
| | Q115 | 2SD313V(D,E) | SILICON | |
| | Q131 | 2SA933(R,S) | SI.TRANSIST ROHM | |
| | Q132 | DTC114YS | DIGITAL TRA ROHM | |
| | Q151 | 2SD2144S(VW) | SI.TRANSIST ROHM | |
| | Q152 | 2SD2144S(VW) | SI.TRANSIST ROHM | |
| | Q153 | DTA114YS | DIGITAL TRA ROHM | |
| | Q201 | DTA114YS | DIGITAL TRA ROHM | |
| | Q202 | DTC114YS | DIGITAL TRA ROHM | |
| | Q204 | DTC114YS | DIGITAL TRA ROHM | |
| | Q205 | DTC114YS | DIGITAL TRA ROHM | |
| | Q301 | 2SC3068 | SI.TRANSIST SANYO | |
| | Q302 | 2SC3068 | SI.TRANSIST SANYO | |
| | Q501 | 2SA950(O,Y) | SI.TRANSIST TOSHIBA | |
| | Q851 | 2SC2060(Q,R) | SI.TRANSIST ROHM | |
| | Q852 | 2SA934(Q,R) | SI.TRANSIST ROHM | |

I. C. S.

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | IC201 | MN171202J5W | I.C. | |
| | IC202 | MN1281(P,Q) | I.C(DIGI-MO MATSUSHITA | |
| | IC203 | GP1U571X | INFRARED DE SHARP | |
| | IC301 | MN35502 | I.C(DIGI-MO MATSUSHITA | |
| | IC302 | VC4580D | I.C(MONO-AN | |
| | IC351 | VC4580D | I.C(MONO-AN | |
| | IC401 | MN662720RB | I.C(DIGI-MO MATSUSHITA | |
| | IC501 | AN8806SB | I.C(M) MATSUSHITA | |
| | IC801 | BA6398FPX | I.C(MONO-AN ROHM | |
| | IC851 | NJM4558L | I.C(MONO-AN DAINICHI | |

DIODES

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | D102 | MTZ5.6JA | ZENER DIODE ROHM | |
| | D111 | 1SR139-200 | SI.DIODE ROHM | |
| | D112 | 1SR139-200 | SI.DIODE ROHM | |
| | D113 | 1SR139-200 | SI.DIODE ROHM | |
| | D114 | MTZ30JC | ZENER DIODE ROHM | |
| | D115 | 1SR139-200 | SI.DIODE ROHM | |
| | D116 | MTZ5.6JA | ZENER DIODE ROHM | |
| ⚠ | D121 | 11E2 | SI.DIODE NIHONINTER | |
| ⚠ | D122 | 11E2 | SI.DIODE NIHONINTER | |
| ⚠ | D123 | 11E2 | SI.DIODE NIHONINTER | |
| ⚠ | D124 | 11E2 | SI.DIODE NIHONINTER | |
| | D131 | 1SS133 | SI.DIODE ROHM | |
| | D132 | 1SS133 | SI.DIODE ROHM | |
| | D204 | 1SS133 | SI.DIODE ROHM | |
| | D205 | 1SS133 | SI.DIODE ROHM | |
| | D207 | SLA-380MT | L.E.D. ROHM | |
| | D208 | SLA-380LT | L.E.D. ROHM | |
| | D871 | 1SS133 | SI.DIODE ROHM | |

⚠ : SAFETY PARTS

CAPACITORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | C101 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C102 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | BS |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | EF |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | EN |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | G |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | U |
| | C103 | EETB1CM-338E | 3300MF 16V E.CAPACITO | UT |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | BS |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | EF |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | EN |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | G |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | U |
| | C104 | EETB1CM-228E | 2200MF 16V E.CAPACITO | UT |
| | C107 | QETB1EM-476 | 47MF 25V AL E.CAPAC | |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | BS |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | EF |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | EN |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | G |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | U |
| | C109 | EETB1AM-227E | 220MF 10V E.CAPACITO | UT |
| | C120 | QETB1HM-107 | 100MF 50V E.CAPACITO | |
| | C121 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C122 | QETB1EM-477E | 470MF 25V E.CAPACITO | |
| | C124 | QFV81HJ-104 | 0.1MF 50V THIN FILM | |
| | C125 | QETB1EM-477E | 470MF 25V E.CAPACITO | |
| | C126 | QETB1AM-476 | 47MF 10V E.CAPACITO | |
| | C127 | QETB1AM-107 | 100MF 10V AL E.CAPAC | |
| | C131 | QETB1CM-227 | 220MF 16V AL E.CAPAC | |
| | C132 | QETB1CM-226 | 22MF 16V E.CAPACITO | |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | BS |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | EF |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | EN |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | G |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | U |
| | C201 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | UT |
| | C203 | QCHB1EZ-223 | 0.022MF 25V CER.CAPACI | |
| | C204 | QER50JM-107 | 100MF 6.3V AL E.CAPAC | |
| | C205 | QCBB1HK-331Y | 330PF 50V CER.CAPACI | |
| | C207 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C301 | QCT30CH-5R6Y | 5.6PF 50V CER.CAPACI | |
| | C302 | QCT30CH-5R6Y | 5.6PF 50V CER.CAPACI | |
| | C303 | QETB1AM-477 | 470MF 10V E.CAPACITO | |
| | C304 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C305 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C306 | QETB1AM-227 | 220MF 10V E.CAPACITO | |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | BS |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EF |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EN |
| | C307 | QCT30CH-180Y | 18PF 50V CER.CAPACI | G |
| | C307 | QCT30CH-100Y | 10PF 50V CER.CAPACI | U |
| | C307 | QCT30CH-100Y | 10PF 50V CER.CAPACI | UT |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | BS |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EF |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | EN |
| | C308 | QCT30CH-180Y | 18PF 50V CER.CAPACI | G |
| | C308 | QCT30CH-120Y | 12PF 50V CER.CAPACI | U |
| | C308 | QCT30CH-120Y | 12PF 50V CER.CAPACI | UT |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | BS |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | EF |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | EN |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | G |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | U |
| | C309 | EETC1AM-477Z | 470MF 10V ELECTRO | UT |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | BS |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | EF |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | EN |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | G |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | U |
| | C310 | EETC1AM-477Z | 470MF 10V ELECTRO | UT |
| | C311 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C312 | QCZ0205-155 | 1.5MF 25V C.CAPACITO | |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | BS |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EF |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EN |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | G |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | U |
| | C315 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | UT |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | BS |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EF |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | EN |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | G |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | U |
| | C316 | QFP81HJ-392 | 3900PF 50V POLYPROPY. | UT |
| | C317 | QFP81HJ-122 | 1200PF 50V POLYPROPY. | |
| | C318 | QFP81HJ-122 | 1200PF 50V POLYPROPY. | |
| | C319 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C320 | QETB1HM-475E | 4.7MF 50V E.CAPACITO | |
| | C323 | QFP81HJ-101 | 100PF 50V POLYPROPY. | |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | BS |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EF |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | EN |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | G |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | U |
| | C323 | QFN81HJ-333 | 0.033MF 50V MYLAR CAPA | UT |

## CAPACITORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | | | AREA |
|---|---|---|---|---|---|---|
| | C324 | QFP81HJ-101 | 100PF | 50V | POLYPROPY. | |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | BS |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | EF |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | EN |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | G |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | U |
| | C324 | QFN81HJ-333 | 0.033MF | 50V | MYLAR CAPA | UT |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | BS |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EF |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EN |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | G |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | U |
| | C325 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | UT |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | BS |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EF |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | EN |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | G |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | U |
| | C326 | QFP81HJ-181 | 180PF | 50V | POLYPROPY. | UT |
| | C331 | EET2502-476N | 47MF | | AL E.CAPAC | |
| | C332 | EET2502-476N | 47MF | | AL E.CAPAC | |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | BS |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EF |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EN |
| | C337 | EFZ0101-103S | 0.01MF | | POLYPROPY. | G |
| | C337 | QFN81HJ-103 | 0.01MF | | | U,UT |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | BS |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EF |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | EN |
| | C338 | EFZ0101-103S | 0.01MF | | POLYPROPY. | G |
| | C338 | QFN81HJ-103 | 0.01MF | | | U,UT |
| | C339 | QFN81HJ-104 | 0.1MF | 50V | METAL.MYLA | |
| | C340 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C382 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C383 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C384 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C385 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C386 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C387 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C388 | QETB1CM-226 | 22MF | 16V | E.CAPACITO | |
| | C389 | QETB1CM-476 | 47MF | 16V | AL E.CAPAC | |
| | C390 | QCBB1HK-471Y | 470PF | 50V | CER.CAPACI | |
| | C391 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C391 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | |
| | C392 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C393 | QFN81HJ-103 | 0.01MF | 50V | METAL.MYLA | |
| | C394 | QFN81HJ-103 | 0.01MF | 50V | METAL.MYLA | |
| | C401 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C402 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C404 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C405 | QCBB1HK-471Y | 470PF | 50V | CER.CAPACI | |
| | C406 | QFN81HJ-223 | 0.022MF | 50V | METAL.MYLA | |
| | C407 | QFV71HJ-334ZM | 0.33MF | 50V | THIN FILM | |
| | C408 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C409 | QETB1AM-107 | 100MF | 10V | AL E.CAPAC | |
| | C410 | QCF31HP-103Z | 0.01MF | 50V | CER.CAPACI | |
| | C413 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C414 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C415 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C416 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C417 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C418 | QCT30CH-2R2Y | 2.2PF | 50V | CER.CAPACI | |
| | C421 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C422 | QETB0JM-227 | 220MF | 6.3V | E.CAPACITO | |
| | C423 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C424 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C501 | QETB1AM-107 | 100MF | 10V | AL E.CAPAC | |
| | C502 | QCZ0205-155 | 1.5MF | 25V | C.CAPACITO | |
| | C503 | QETB1AM-476 | 47MF | 10V | E.CAPACITO | |
| | C504 | QETC0JM-107ZM | 100MF | 6.3V | AL E.CAPAC | |
| | C505 | QCBB1HK-271Y | 270PF | 50V | CER.CAPACI | |
| | C506 | QCSB1HJ-470Y | 47PF | 50V | CER.CAPACI | |
| | C507 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C509 | QCXB1CM-222Y | 2200PF | 16V | CER.CAPACI | |
| | C510 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C511 | QCGB1HK-821 | 820PF | 50V | CER.CAPACI | |
| | C514 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C517 | QFN31HJ-332Z | 3300PF | 50V | MYLAR CAPA | |
| | C518 | QETB1HM-105 | 1MF | 50V | AL E.CAPAC | |
| | C519 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C520 | QCSB1HJ-680 | 68PF | 50V | CER.CAPACI | |
| | C522 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C523 | QETB1HM-106 | 10MF | 50V | E.CAPACITO | |
| | C524 | QETB1AM-476 | 47MF | 10V | E.CAPACITO | |
| | C525 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C526 | QCBB1HK-101Y | 100PF | 50V | CER.CAPACI | |
| | C527 | QFV81HJ-273 | 0.027MF | 50V | THIN FILM | |
| | C528 | QFN81HJ-472 | 4700PF | 50V | MYLAR CAPA | |
| | C530 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C553 | QFV81HJ-104 | 0.1MF | 50V | THIN FILM | |
| | C701 | QCBB1HK-101Y | 100PF | 50V | CER.CAPACI | |
| | C710 | QCVB1CM-103Y | 0.01MF | 16V | CER.CAPACI | |
| | C801 | QETB1CM-227 | 220MF | 16V | AL E.CAPAC | |
| | C802 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | |
| | C803 | QFN81HJ-273 | 0.027MF | 50V | METAL.MYLA | |
| | C804 | QFN81HJ-183 | 0.018MF | 50V | METAL.MYLA | |
| | C806 | QFV81HJ-273 | 0.027MF | 50V | THIN FILM | |

## CAPACITORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | | | AREA |
|---|---|---|---|---|---|---|
| | C851 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C852 | QETB1CM-107 | 100MF | 16V | AL E.CAPAC | |
| | C854 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C855 | QCHB1EZ-223 | 0.022MF | 25V | CER.CAPACI | |
| | C856 | QCF31HP-103Z | 0.01MF | 50V | CER.CAPACI | |
| | C876 | QETB1HM-475E | 4.7MF | 50V | E.CAPACITO | |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | BS |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | EF |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | EN |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | G |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | U |
| | C880 | QCF21HP-223A | 0.022MF | 50V | CER.CAPACI | UT |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | | | AREA |
|---|---|---|---|---|---|---|
| ⚠ | R101 | PTH8L07BB2R2N1B | | | POSITIVE T | |
| ⚠ | R102 | PTH8L07BB2R2N1B | | | POSITIVE T | |
| | R105 | QRD161J-222 | 2.2K | 1/6W | CARBON RES | |
| | R107 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R109 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R113 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R114 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R115 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R116 | QRD161J-911 | 910 | 1/6W | CARBON RES | |
| | R117 | QRD161J-911 | 910 | 1/6W | CARBON RES | |
| | R118 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R131 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R132 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R133 | QRD161J-221 | 220 | 1/6W | CARBON RES | |
| | R134 | QRD167J-822 | 8.2K | 1/6W | CARBON RES | |
| | R135 | QRD161J-683 | 68K | 1/6W | CARBON RES | |
| | R136 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R141 | QRD161J-242 | 2.4K | 1/6W | CARBON RES | |
| ⚠ | R142 | QRZ0077-560 | 56 | 1/4W | FUSIBLE RE | |
| | R143 | QRD167J-121 | 120 | 1/6W | CARBON RES | |
| | R144 | QRD161J-242 | 2.4K | 1/6W | CARBON RES | |
| | R151 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R152 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| ⚠ | R161 | QRZ0077-100 | 10 | 1/4W | FUSIBLE RE | |
| | R162 | QRD161J-181 | 180 | 1/6W | CARBON RES | |
| | R163 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| ⚠ | R164 | QRV144F-1801 | 1.8K | 1/4W | CONST.META | |
| ⚠ | R165 | QRV144F-1801 | 1.8K | 1/4W | CONST.META | |
| | R201 | QRD161J-821 | 820 | 1/6W | CARBON RES | |
| | R202 | QRD161J-472 | 4.7K | 1/6W | CARBON RES | |
| | R203 | QRD161J-472 | 4.7K | 1/6W | CARBON RES | |
| | R210 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R211 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R212 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R213 | QRD161J-473 | 47K | 1/6W | CARBON RES | |
| | R216 | QRD161J-181 | 180 | 1/6W | CARBON RES | |
| | R217 | QRD161J-181 | 180 | 1/6W | CARBON RES | |
| | R252 | QRD161J-103 | 10K | 1/6W | CARBON RES | |
| | R301 | QRD167J-680 | 68 | 1/6W | CARBON RES | |
| | R302 | QRD167J-680 | 68 | 1/6W | CARBON RES | |
| | R303 | QRD161J-271 | 270 | 1/6W | CARBON RES | |
| | R304 | QRD161J-181 | 180 | 1/6W | CARBON RES | |
| | R305 | QRD161J-271 | 270 | 1/6W | CARBON RES | |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | BS |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | EF |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | EN |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | G |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | U |
| | R306 | QRD161J-181 | 180 | 1/6W | CARBON RES | UT |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | BS |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | EF |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | EN |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | G |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | U |
| | R307 | QRD161J-181 | 180 | 1/6W | CARBON RES | UT |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R308 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | BS |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | EF |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | EN |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | G |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | U |
| | R309 | QRD161J-183 | 18K | 1/6W | CARBON RES | UT |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | EN |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | G |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | U |
| | R310 | QRD161J-273 | 27K | 1/6W | CARBON RES | UT |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | BS |
| | R311 | QRD161J-273 | 27K | 1/6W | CARBON RES | EF |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R311 | QRD161J-273 | 27K 1/6W CARBON RES | EN |
| | R311 | QRD161J-273 | 27K 1/6W CARBON RES | G |
| | R311 | QRD161J-273 | 27K 1/6W CARBON RES | U |
| | R311 | QRD161J-273 | 27K 1/6W CARBON RES | UT |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R312 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R313 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | BS |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | EF |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | EN |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | G |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | U |
| | R314 | QRD161J-273 | 27K 1/6W CARBON RES | UT |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | BS |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | EF |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | EN |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | G |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | U |
| | R315 | QRD161J-273 | 27K 1/6W CARBON RES | UT |
| | R318 | QRD167J-153 | 15K 1/6W CARBON RES | |
| | R319 | QRD167J-153 | 15K 1/6W CARBON RES | |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R320 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R321 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R326 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R327 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | BS |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | EF |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | EN |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | G |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | U |
| | R328 | QRD161J-132 | 1.3K 1/6W CARBON RES | UT |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | BS |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | EF |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | EN |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | G |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | U |
| | R329 | QRD161J-132 | 1.3K 1/6W CARBON RES | UT |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R330 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | BS |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | EF |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | EN |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | G |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | U |
| | R331 | QRD167J-332 | 3.3K 1/6W CARBON RES | UT |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R332 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | BS |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | EF |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | EN |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | G |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | U |
| | R333 | QRD161J-183 | 18K 1/6W CARBON RES | UT |
| | R342 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R343 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | BS |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | EF |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | EN |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | G |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | U |
| | R344 | QRD167J-431 | 430 1/6W CARBON RES | UT |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | BS |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | EF |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | EN |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | G |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | U |
| | R345 | QRD167J-431 | 430 1/6W CARBON RES | UT |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | BS |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | EF |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | EN |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | G |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | U |
| | R347 | QRD167J-560 | 56 1/6W CARBON RES | UT |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | BS |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | EF |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | EN |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | G |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | U |
| | R348 | QRD167J-560 | 56 1/6W CARBON RES | UT |
| | R354 | QRD161J-684 | 680K 1/6W CARBON RES | |
| | R355 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R356 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R357 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R362 | QRD161J-103 | 10K 1/6W CARBON RES | |
| ⚠ | R363 | QRZ0077-4R7 | 4.7 1/4W FUSE RESIS | |
| ⚠ | R364 | QRZ0077-4R7 | 4.7 1/4W FUSE RESIS | |
| | R380 | QRD161J-561 | 560 1/6W CARBON RES | |
| | R381 | QRD161J-561 | 560 1/6W CARBON RES | |
| | R382 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R383 | QRD161J-473 | 47K 1/6W CARBON RES | |
| | R384 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R385 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R386 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R387 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R388 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R389 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R390 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R391 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R392 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R393 | QRD161J-271 | 270 1/6W CARBON RES | |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | BS |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | EF |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | EN |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | G |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | U |
| | R394 | QRD161J-101 | 100 1/6W CARBON RES | UT |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | BS |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | EF |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | EN |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | G |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | U |
| | R395 | QRD161J-101 | 100 1/6W CARBON RES | UT |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | BS |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | EF |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | EN |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | G |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | U |
| | R396 | QRD167J-680 | 68 1/6W CARBON RES | UT |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | BS |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | EF |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | EN |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | G |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | U |
| | R397 | QRD167J-680 | 68 1/6W CARBON RES | UT |
| | R402 | QRD161J-124 | 120K 1/6W CARBON RES | |
| | R403 | QRD167J-155 | 1.5M 1/6W CARBON RES | |
| | R404 | QRD161J-104 | 100K 1/6W CARBON RES | |
| | R405 | QRD161J-104 | 100K 1/6W CARBON RES | |
| | R406 | QRD161J-681 | 680 1/6W CARBON RES | |
| | R408 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R409 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R410 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R415 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R416 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R417 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R418 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R419 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R420 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R421 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R422 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R423 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R424 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R425 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R426 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R427 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R428 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | R501 | QRD161J-471 | 470 1/6W CARBON RES | |
| | R504 | QRD161J-114 | 110K 1/6W CARBON RES | |
| | R505 | QRD161J-273 | 27K 1/6W CARBON RES | |
| | R507 | QRD167J-134 | 130K 1/6W CARBON RES | |
| | R509 | QRD161J-103 | 10K 1/6W CARBON RES | |
| | R510 | QRD167J-154 | 150K 1/6W CARBON RES | |
| | R511 | QRD161J-394 | 390K 1/6W CARBON RES | |

## RESISTORS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | R512 | QRD161J-913 | 91K 1/6W CARBON RES | |
| | R514 | QRD161J-123 | 12K 1/6W CARBON RES | |
| | R518 | QRD167J-121 | 120 1/6W CARBON RES | |
| | R520 | QRD161J-910Y | 91 1/6W CARBON RES | |
| | R524 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R525 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R526 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R527 | QRD161J-2R2 | 2.2 1/6W CARBON RES | |
| | R701 | QRD161J-470 | 47 1/6W CARBON RES | |
| | R702 | QRD161J-221 | 220 1/6W CARBON RES | |
| | R801 | QRD161J-821 | 820 1/6W CARBON RES | |
| | R802 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R803 | QRD161J-112 | 1.1K 1/6W CARBON RES | |
| | R804 | QRD167J-113 | 11K 1/6W CARBON RES | |
| | R805 | QRD167J-562 | 5.6K 1/6W CARBON RES | |
| | R806 | QRD161J-124 | 120K 1/6W CARBON RES | |
| | R807 | QRD167J-332 | 3.3K 1/6W CARBON RES | |
| | R808 | QRD161J-752 | 7.5K 1/6W CARBON RES | |
| | R809 | QRD167J-223 | 22K 1/6W CARBON RES | |
| | R810 | QRD161J-472 | 4.7K 1/6W CARBON RES | |
| | R811 | QRD167J-153 | 15K 1/6W CARBON RES | |
| | R812 | QRD161J-752 | 7.5K 1/6W CARBON RES | |
| | R813 | QRD167J-751 | 750 1/6W CARBON RES | |
| | R814 | QRD161J-683 | 68K 1/6W CARBON RES | |
| | R871 | QRD161J-513 | 51K 1/6W CARBON RES | |
| | R872 | QRD161J-513 | 51K 1/6W CARBON RES | |
| | R873 | QRD161J-753 | 75K 1/6W CARBON RES | |
| | R874 | QRD161J-623 | 62K 1/6W CARBON RES | |
| | R875 | QRD161J-221 | 220 1/6W CARBON RES | |
| | R876 | QRD161J-684 | 680K 1/6W CARBON RES | |
| | R890 | QRD161J-102 | 1K 1/6W CARBON RES | |
| | RA202 | QRB035J-472 | 4.7K 1/8W NETWORK RE | |

## OTHERS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | | EMW10511-202 | P.C.BOARD | |
| | | GBSG3008CC | TAPPING SCR | |
| | | E3400-431 | FELT SPACER | |
| | | EWT011-124 | TERMINAL WI | |
| | | QWE886-14RR | WIRE | U |
| | | QWE888-14RR | PIN WIRE | U |
| | | QWE881-14RR | VINYL WIRE | U |
| | | QWE886-14RR | WIRE | UT |
| | | QWE888-14RR | PIN WIRE | UT |
| | | QWE881-14RR | VINYL WIRE | UT |
| | J201 | EMV7123-019R | CONNECTOR 19PIN | |
| | J202 | EMV7123-019 | P.W.BOARD C 19PIN | |
| | J301 | EMN00TV-217A | PIN JACK | BS |
| | J301 | EMN00TV-217A | PIN JACK | EF |
| | J301 | EMN00TV-217A | PIN JACK | EN |
| | J301 | EMN00TV-217A | PIN JACK | G |
| | J301 | EMN00TV-217A | PIN JACK | U |
| | J301 | EMN00TV-217A | PIN JACK | UT |
| | J371 | QMS6302-131 | HEADPHONE J | |
| | J701 | QMS3501-020 | PIN JACK | |
| | K301 | ENZ8101-007 | INDUCTOR | BS |
| | K301 | ENZ8101-007 | INDUCTOR | EF |
| | K301 | ENZ8101-007 | INDUCTOR | EN |
| | K301 | ENZ8101-007 | INDUCTOR | G |
| | K302 | ENZ8101-007 | INDUCTOR | BS |
| | K302 | ENZ8101-007 | INDUCTOR | EF |
| | K302 | ENZ8101-007 | INDUCTOR | EN |
| | K302 | ENZ8101-007 | INDUCTOR | G |
| | L301 | EQL4004-1R0 | INDUCTOR | |
| | L302 | EQL4004-1R0 | INDUCTOR | |
| | L303 | EQL4004-1R0 | INDUCTOR | |
| ⚠ | P101 | QMCB001-E02HBS | AC SOCKET | BS |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | EF |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | EN |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | G |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | U |
| ⚠ | P101 | QMCB001-E02H | AC SOCKET | UT |
| | P102 | EMV5109-005A | MALE CONNEC 5PIN | |
| | P103 | EMV5109-006A | CONNECT TER 6PIN | |
| | P104 | EMV7144-015 | F.P.C.PLUG 15PIN | |
| | S201 | QSQ1001-E01ZJ7 | PUSH SWITCH PLAY/PAUSE | |
| | S202 | QSQ1001-E01ZJ7 | PUSH SWITCH DISPLAY ON/OFF | |
| | S203 | QSQ1001-E01ZJ7 | PUSH SWITCH CANCEL | |
| | S204 | QSQ1001-E01ZJ7 | PUSH SWITCH ⏮/⏪ | |
| | S205 | QSQ1001-E01ZJ7 | PUSH SWITCH ⏩/⏭ | |
| | S206 | QSQ1001-E01ZJ7 | PUSH SWITCH OPEN/CLOSE | |
| | S207 | QSQ1001-E01ZJ7 | PUSH SWITCH STOP | |
| | S208 | QSQ1001-E01ZJ7 | PUSH SWITCH 5 | |
| | S209 | QSQ1001-E01ZJ7 | PUSH SWITCH 4 | |
| | S210 | QSQ1001-E01ZJ7 | PUSH SWITCH 3 | |
| | S211 | QSQ1001-E01ZJ7 | PUSH SWITCH 2 | |
| | S212 | QSQ1001-E01ZJ7 | PUSH SWITCH 1 | |
| | S213 | QSQ1001-E01ZJ7 | PUSH SWITCH +10 | |
| | S214 | QSQ1001-E01ZJ7 | PUSH SWITCH 10 | |
| | S215 | QSQ1001-E01ZJ7 | PUSH SWITCH 9 | |

⚠ : SAFETY PARTS

## OTHERS

| ⚠ | ITEM | PART NUMBER | DESCRIPTION | AREA |
|---|---|---|---|---|
| | S216 | QSQ1001-E01ZJ7 | PUSH SWITCH 8 | |
| | S217 | QSQ1001-E01ZJ7 | PUSH SWITCH 7 | |
| | S218 | QSQ1001-E01ZJ7 | PUSH SWITCH 6 | |
| | S219 | QSQ1001-E01ZJ7 | PUSH SWITCH REPEAT | |
| | S220 | QSQ1001-E01ZJ7 | PUSH SWITCH RANDOM | |
| | S221 | QSQ1001-E01ZJ7 | PUSH SWITCH PROGRAM | |
| | S222 | QSQ1001-E01ZJ7 | PUSH SWITCH POWER | |
| ⚠ | S901 | QSS1L22-E01 | SLIDE SWITC | U |
| ⚠ | S901 | QSS1L22-E01 | SLIDE SWITC | UT |
| ⚠ | CP101 | ICP-N10 | I.C.PROTECT | |
| | EP301 | EMZ4002-001Z | EARTH PLATE | |
| | EP302 | EMZ4002-001Z | EARTH PLATE | |
| | EP303 | EMZ4002-001Z | EARTH PLATE | |
| | EP351 | E75464-001 | EARTH PLATE | |
| | EP701 | E406604-001 | EARTH BRACK | BS |
| | EP701 | E406604-001 | EARTH BRACK | EF |
| | EP701 | E406604-001 | EARTH BRACK | EN |
| | EP701 | E406604-001 | EARTH BRACK | G |
| | EP701 | E406604-001 | EARTH BRACK | U |
| | EP701 | E406604-001 | EARTH BRACK | UT |
| | FH201 | E306951-222SS | FL.HOLDER | |
| | FL201 | ELU0001-114 | FLUORESCENT | |
| | FS201 | E306805-010 | SPACER | |
| | FW105 | EWR36D-20LS | FLAT WIRE A 6PIN | |
| | FW106 | EWR33B-08LST | FLAT WIRE A 3PIN | |
| | FW107 | EWR37B-30LST | FLAT WIRE A 7PIN | |
| | FW202 | EWR38D-25SS | FLAT WIRE A 8PIN | |
| | HS101 | E70306-001 | HEAT SINK | |
| | JT101 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT102 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT103 | EMV7122-004Z | CONNECT TER 4PIN | |
| | JT104 | EMV7122-103 | CONNECT TER 3PIN | |
| | JT106 | EMV7122-103 | CONNECT TER 3PIN | |
| | XT201 | ECX0060-000EM | CERAMIC RES | |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | BS |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | EF |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | EN |
| | XT301 | ECX0169-344EYJ1 | CRYSTAL | G |
| | XT301 | ECX0169-344EA | CRYSTAL | U |
| | XT301 | ECX0169-344EA | CRYSTAL | UT |

# Accessories List

Symbol No. M 3 M M

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | E30580-2237ABS | INSTRUCTION BOOK | 1 | | BS |
| | | E30580-2234A | INSTRUCTION BOOK | 1 | | EF |
| | | E30580-2235A | INSTRUCTION BOOK | 1 | | EN |
| | | E30580-2234A | INSTRUCTION BOOK | 1 | | G |
| | | E30580-2236A | INSTRUCTION BOOK | 1 | | U |
| | | E30580-2236A | INSTRUCTION BOOK | 1 | | UT |
| ⚠ | 2 | QMP5520-1835BS | POWER CORD | 1 | | BS |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | EF |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | EN |
| ⚠ | | QMP39F0-183E | POWER CORD | 1 | | G |
| ⚠ | | QMP7530-183 | POWER CORD | 1 | | U |
| ⚠ | | QMP7530-183 | POWER CORD | 1 | | UT |
| | 3 | EWP302-011 | SIGNAL CORD | 1 | | |
| | 4 | EWP805-001 | SIGNAL CORD | 1 | | |
| | 5 | RM-SX284U | REMOCON | 1 | | |
| | 6 | R03BPA-2STSA | DRY CELL | 1 | | |
| | 7 | E300196-010B | ENVELOPE | 1 | | |
| | - | E300196-010B | ENVELOPE | 1 | | BS |
| | - | E43486-340A | SAFETY SHEET | 1 | | BS |
| | - | BT20060 | WARRANTY CARD | 1 | | BS |
| | - | BT-20066A | WARRANTY CARD | 1 | | BS |
| | - | BT-20134 | WARRANTY CARD | 1 | | G |
| | - | ENZ2203-001 | ADAPTOR PLUG | 1 | | U |
| | - | ENZ2203-001 | ADAPTOR PLUG | 1 | | UT |

**The Marks for Designated Areas**

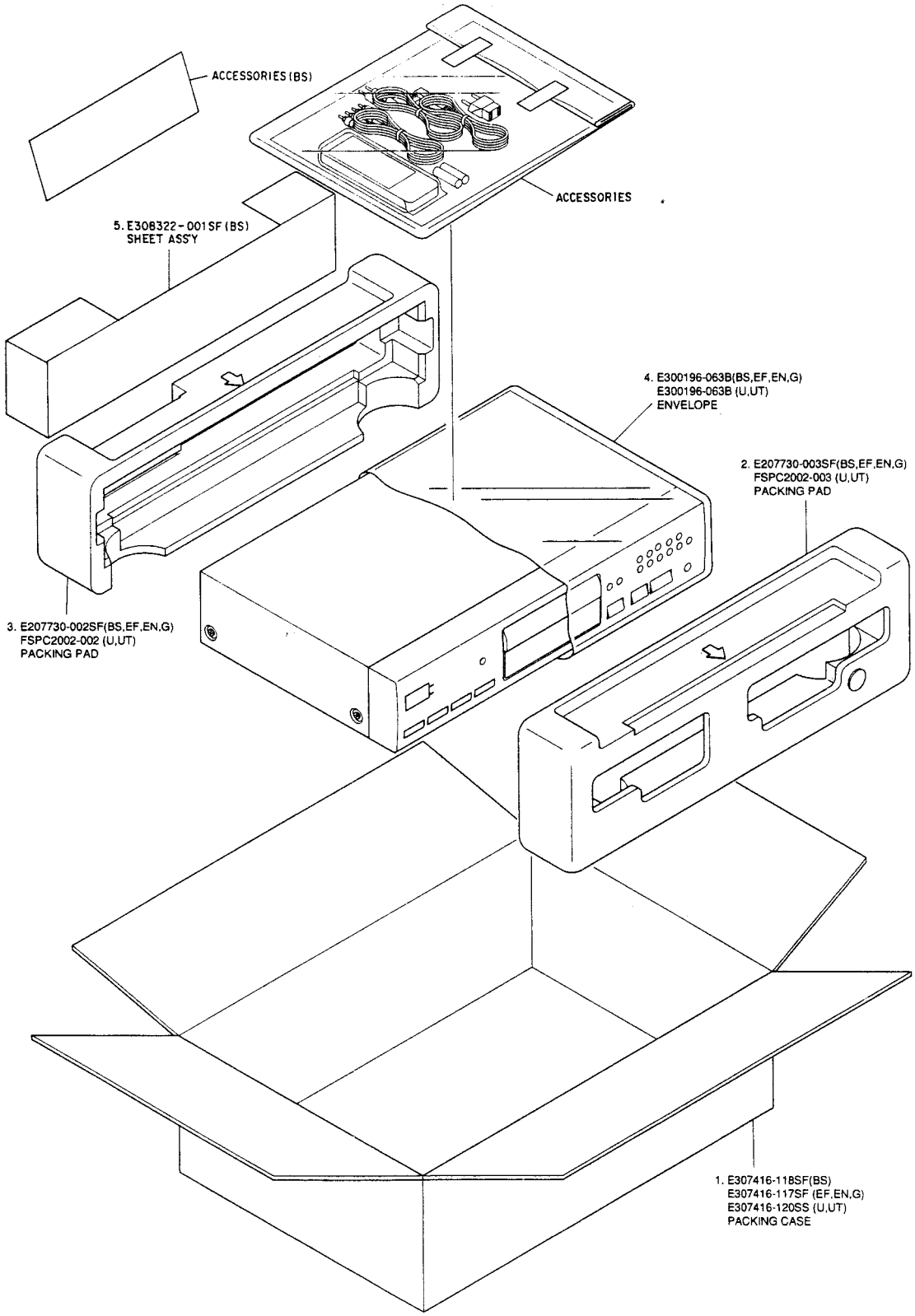
BS .... the U.K. EF .... Continental Europe EN .... Scandinavia

G ..... Germany U ..... Universal Type UT .... Taiwan

No mark indicates all area.

# Packing Materials and Part Numbers

Symbol No. M 4 M M

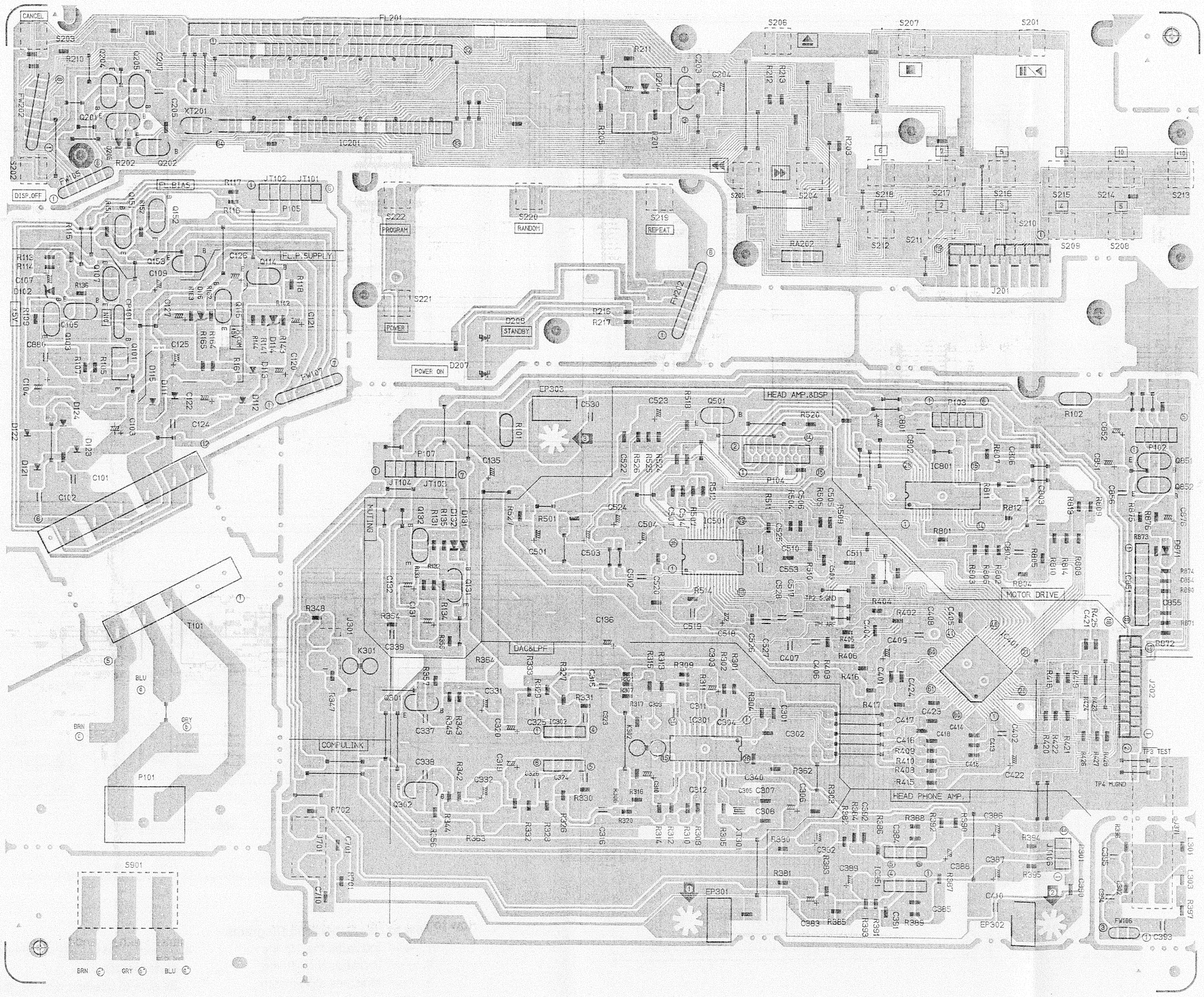



| The Marks for Designated Areas | | | | | |
|---|---|---|---|---|---|
| BS .... | the U.K. | EF .... | Continental Europe | EN .... | Scandinavia |
| G ..... | Germany | U ..... | Universal Type | UT .... | Taiwan |
| No mark indicates all area. | | | | | |

| | |
|---|---|
| XL-V184BK | XL-V184BK |
| XL-V284BK | XL-V284BK |

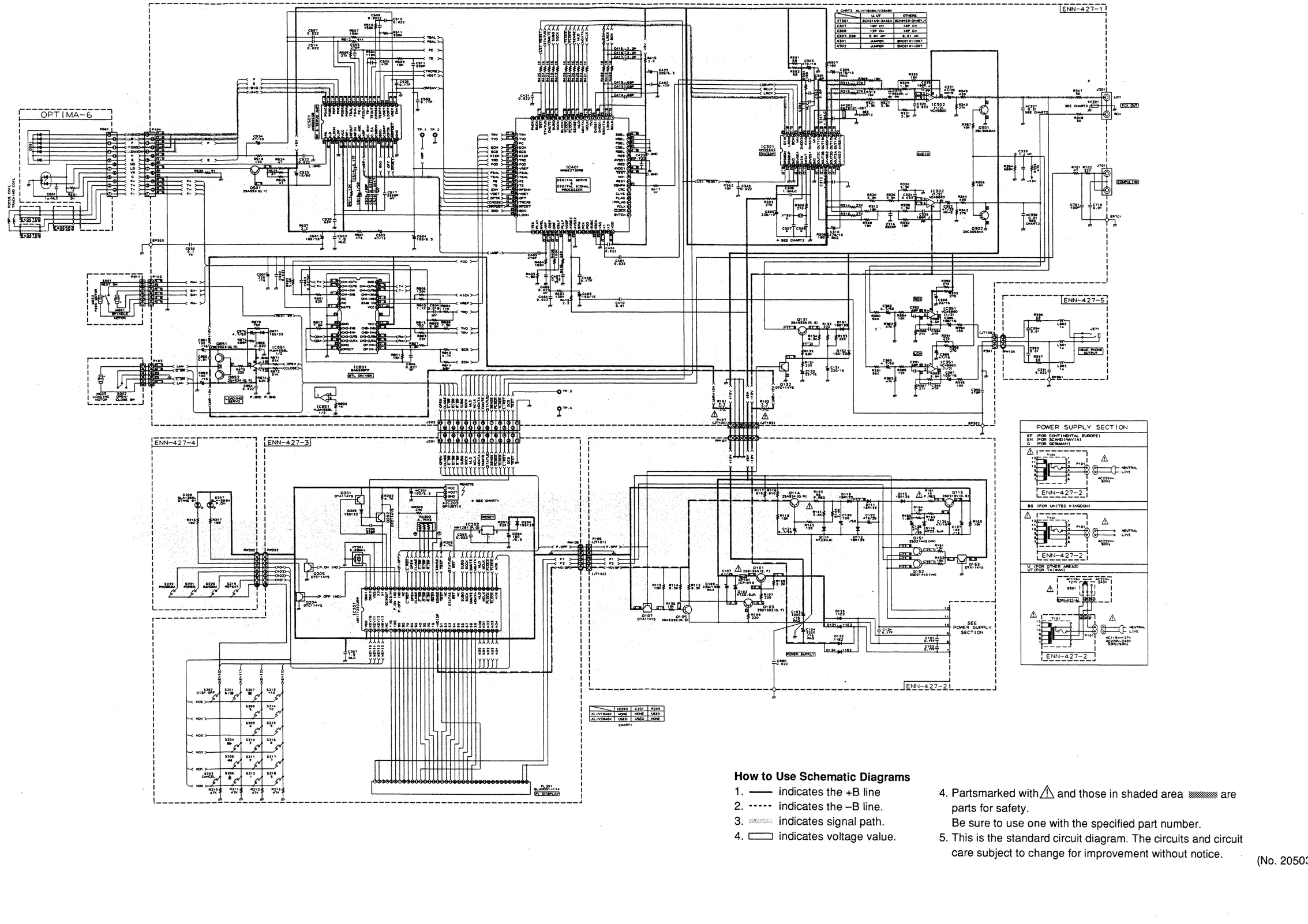
# Printed Circuit Board

■ Main P.C. Board




(No. 20503)

# Schematic Diagrams




| CHART2 XL-V184BK/V284BK | U,VT | OTHERS |
|---|---|---|
| XT301 | EC4153-344EA | EC4153-344EVJ |
| C307 | 10P CH | 10P CH |
| C308 | 12P CH | 18P CH |
| C337, 338 | 0.01 MY | 0.01 MH |
| X301 | JUMPER | RKZ8101-007 |
| X302 | JUMPER | RKZ8101-007 |

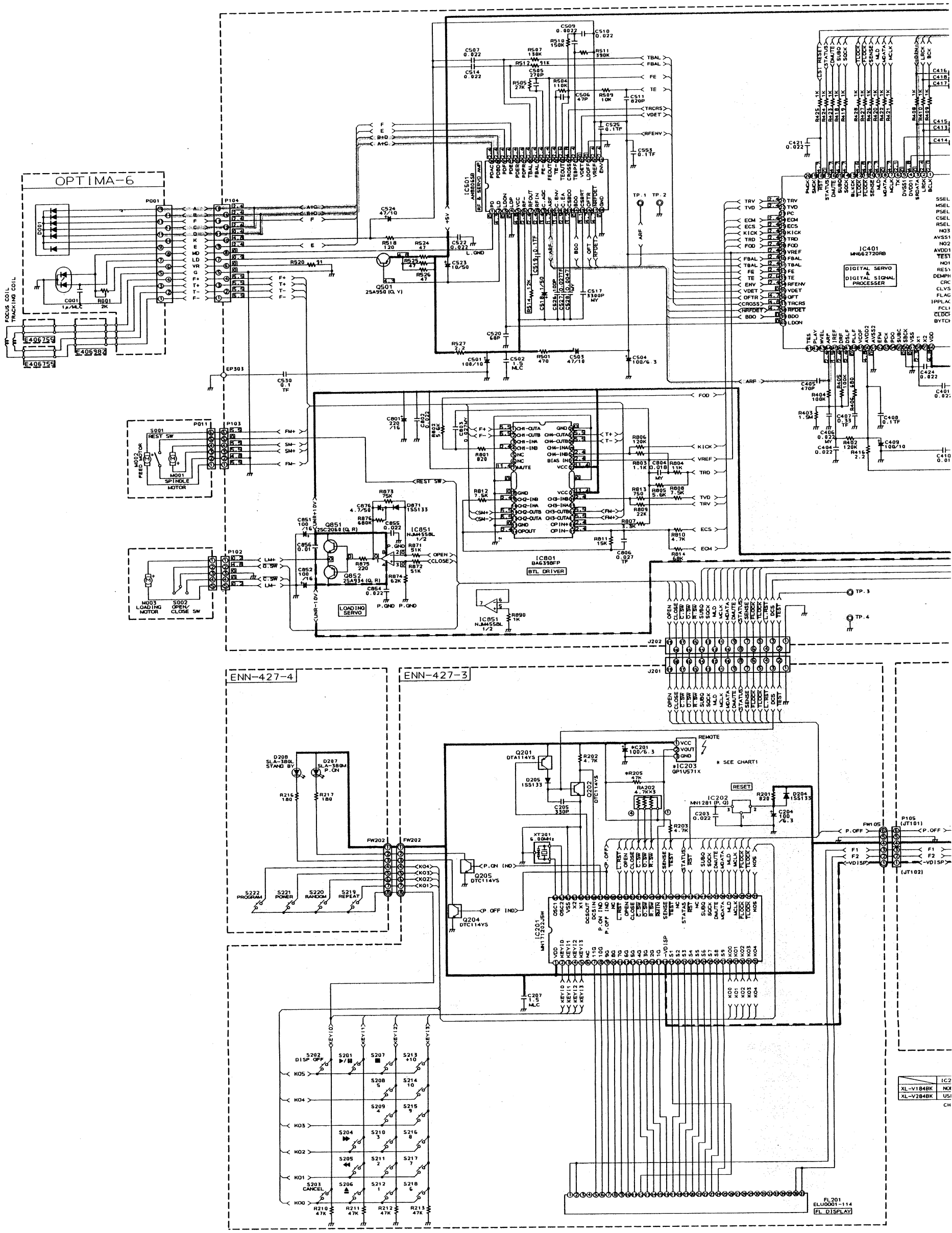
| | IC263 | C201 | R265 |
|---|---|---|---|
| XL-V184BK | NONE | NONE | USED |
| XL-V284BK | USED | USED | NONE |

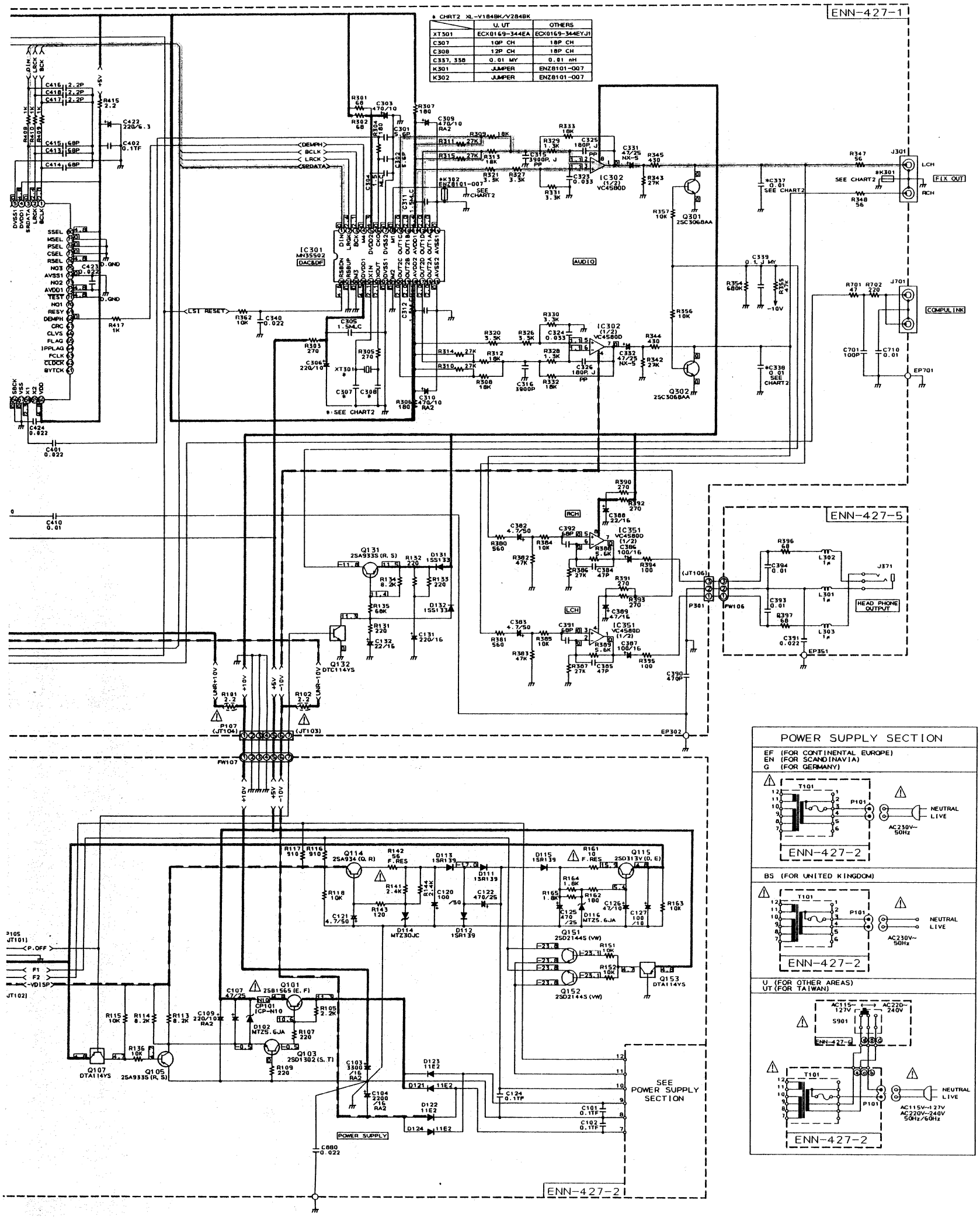
CHART1

## How to Use Schematic Diagrams

1. —— indicates the +B line
2. ----- indicates the –B line.
3. ▒▒▒ indicates signal path.
4. ▭ indicates voltage value.
4. Partsmarked with ⚠ and those in shaded area ▒▒▒ are parts for safety.
   Be sure to use one with the specified part number.
5. This is the standard circuit diagram. The circuits and circuit care subject to change for improvement without notice.

# Schematic Diagrams






## POWER SUPPLY SECTION

EF (FOR CONTINENTAL EUROPE)
EN (FOR SCANDINAVIA)
G (FOR GERMANY)

BS (FOR UNITED KINGDOM)

U (FOR OTHER AREAS)
UT (FOR TAIWAN)

| | IC203 | C201 | R205 |
|---|---|---|---|
| XL-V184BK | NONE | NONE | USED |
| XL-V284BK | USED | USED | NONE |

CHART1

### How to Use Schematic Diagrams

1. —— indicates the +B line
2. ----- indicates the –B line.
3. ▒▒▒ indicates signal path.
4. ▭ indicates voltage value.

4. Partsmarked with ⚠ and those in shaded area ▒▒▒ are parts for safety.
   Be sure to use one with the specified part number.
5. This is the standard circuit diagram. The circuits and circuit care subject to change for improvement without notice.

(No. 20503)